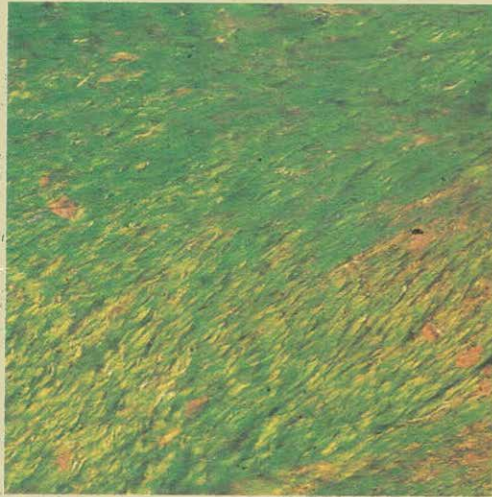


Bab 6



Chapter 6

PROMOSI PENDIDIKAN, KESEDARAN DAN SEBARAN MAKLUMAT ALAM SEKITAR

PENGENALAN

Promosi kesedaran alam sekitar telah menjadi keutamaan kepada Jabatan Alam Sekitar untuk menyokong usaha-usaha negara ke arah pengurusan alam sekitar yang mampan sejak tahun 1975. Deklarasi Langkawi mengenai Alam Sekitar dan Pembangunan yang ditandatangani di persidangan Ketua-Ketua Kerajaan Kommonwel 1989, telah meningkatkan tanggungjawab dan kesedaran kepada perlindungan dan pemuliharaan alam sekitar yang mampan.

Program alam sekitar telah diambilkira di awal Pelan Pembangunan Kebangsaan Ketiga (Rancangan Malaysia Ketiga 1975-1979) dan kesedaran alam sekitar orang awam dan pendidikan alam sekitar telah diintegrasikan dalam Pelan Pembangunan Kebangsaan sebagai strategi jangka panjang untuk pembangunan mampan. Rancangan Malaysia Ketujuh (1996-2000) menekankan lebih lanjut akan kepentingan pendidikan alam sekitar sebagai elemen penting dalam pembangunan mampan.

Promosi Kesedaran Alam Sekitar (Kegiatan Luar Bilik Darjah)

Projek Wira Alam

Wira Alam adalah projek khas yang dipelopori oleh JAS dengan kerjasama daripada Persatuan Pencinta Alam Malaysia untuk pelajar berumur 10-16 tahun. Ia bertujuan meningkatkan kesedaran alam sekitar di kalangan para pelajar disamping menggalakkan mereka melibatkan diri secara lebih aktif di dalam aktiviti-aktiviti alam sekitar. Projek ini telah dilancarkan bersama oleh Y.B Menteri Pendidikan dan Y.B Menteri Sains, Teknologi dan Alam Sekitar pada 5 Jun 1998 bersempena Sambutan Hari Alam Sekitar Sedunia.

PROMOTING ENVIRONMENTAL EDUCATION, PUBLIC AWARENESS AND INFORMATION DISSEMINATION

INTRODUCTION

The promotion of environmental awareness has always been among the priorities of the Department of Environment as well as a cornerstone of national efforts to enhance sustainable environmental management since 1975. The Langkawi Declaration on Environment and Development, by the Commonwealth Heads of Government Conference in 1989 added further impetus to the commitment for environmental sustainability and thereby heightened environmental consciousness.

Environmental concerns have been taken into consideration since the Third National Development Plan (Third Malaysia Plan 1975-1979) and since then public environmental awareness and education programmes have been incorporated as a long term strategy for sustainable development. The Seventh Malaysia Plan (1996-2000) in particular further emphasized the importance of environmental education as a key element for sustainable development.

Promotion of Environmental Awareness (extracurricular school activities)

"Wira Alam" Project

Wira Alam is a unique project initiated by DOE in collaboration with the Malaysian Nature Society (MNS) for students between the ages of 10 to 16. It aims to inculcate environmental consciousness among students and to inspire students to actively participate in environmental activities. The project was officially launched jointly by the Minister of Education and the Minister of Science, Technology and the Environment on 5 June 1998 in conjunction with the 1998 World Environment Day.



Terdapat tiga buku aktiviti untuk tahap pencapaian yang dikenali sebagai Wira Diri, Wira Komuniti dan Wira Alam yang memberi penekanan tahap pencapaian dalam projek ini. Sebanyak 43 buah sekolah yang melibatkan 2,216 orang pelajar dari sekolah menengah dan 252 orang pelajar dari sekolah rendah telah menyertai projek ini.

Pada tahun 1999, seramai 229 orang pelajar dari 11 buah sekolah seluruh Malaysia telah berjaya dalam kategori pertama projek ini dan dianugerah sebagai Wira Diri. Majlis penganugerah telah diadakan di Sekolah Tengku Ampuan Jemaah, Port Kelang pada 16 November 1999 yang melibatkan 86 orang pelajar iaitu kumpulan pertama dari SMK Convent Klang dan SMK Bandar Sunway dan telah menerima anugerah tersebut dari Ketua Pengarah Alam Sekitar. Sekolah-sekolah lain yang telah melepasi kategori pertama projek ini adalah:

- SMK Baling, Kedah
- SMK Bukit Selambau, Kedah
- SMK Ave Maria Convent, Perak
- SMK Durian Tunggal, Melaka
- SMK Puteri, Seremban, N. Sembilan
- SMK Mengarak, Pahang
- SMK Agaseh, Lahad Datu, Sabah

Kem Kesedaran Alam Sekitar

Kem kesedaran alam sekitar telah dilaksanakan sejak tahun 1994 berdasarkan kepada Ekosistem Sungai, Hutan, Tanah Tinggi, Peladangan Organik, Perbandaran dan Perladangan. Hingga kini, sejumlah 4000 orang pelajar telah menyertai di dalam 81 buah kem yang dianjurkan di seluruh Malaysia oleh pegawai-pegawai JAS dengan kerjasama daripada pertubuhan bukan kerajaan seperti 'Malaysian Nature Society', 'Malaysian Worldwide Fund for Nature', Persatuan Pengguna Malaysia (FOMCA), 'Centre for Environment Technology and Development (CETDEM)', Kumpulan Golden Hope Plantation, dan institut seperti Universiti Malaya dan Universiti Putra Malaysia.

Essentially the project consists of three activity booklets for three different levels of environmental achievements: 'Wira Diri', 'Wira Komuniti' and 'Wira Alam' to represent and signify the depth of involvement in the project. Forty three schools comprising of 2,216 students at secondary level and 252 students at the primary level had so far participated in the project.

In 1999, 229 students from 11 schools throughout Malaysia successfully completed the first level and attained the "Wira Diri" award. On 16 November 1999, the first batch of 86 students from SMK Tengku Ampuan Jemaah Port Klang, SMK Bandar Baru Bangi, SMK Convent Klang and SMK Bandar Sunway received their awards from the Director-General of Environment. Other schools which had also successfully completed the "Wira Diri" stage included:

- SMK Baling, Kedah
- SMK Bukit Selambau, Kedah
- SMK Ave Maria Convent, Perak
- SMK Durian Tunggal, Melaka
- SMK Puteri, Seremban, N. Sembilan
- SMK Mengarak, Pahang
- SMK Agaseh, Lahad Datu, Sabah

Environmental Awareness Camps

Environmental awareness camps had been organized since 1994 based on the ecological concepts of the River Ecosystem, Marine Ecosystem, Forest Ecosystem, Highland Ecosystem, Organic Farming Ecosystem, Urban Ecosystem and Plantation Ecosystem. To date, over 4000 students had participated in 81 camps organized all over Malaysia and conducted by DOE officials with the cooperation of environmental non-governmental organisations such as the Malaysian Nature Society, the Malaysian Worldwide Fund for Nature, the Federation of Malaysia Consumers' Association (FOMCA), Centre for Environment Technology and Development (CETDEM), Golden Hope Plantation Group and institutions such as the University of Malaya and University Putra Malaysia.



Pada tahun 1999, sejumlah 28 buah kem telah diadakan seluruh negara. Dua pelajar daripada kem ini telah dijemput ke kem anjuran Golden Hope Plantation di Pulau Carey pada 18 November – 2 Disember 1999.

Promosi Kesedaran Alam Sekitar melalui Pertandingan Bertemakan Alam Sekitar

Projek Riadah Alam Sekitar (PRIAS)

Projek ini merupakan anjuran bersama oleh Jabatan Alam Sekitar, Kementerian Pendidikan, dan Persatuan Sains Malaysia dan ditajai oleh Tetra Pak Sdn. Bhd. Objektif PRIAS ialah untuk menyemai kesedaran alam sekitar dan tanggungjawab kepada para remaja untuk membolehkan mereka membuat keputusan berlandaskan alam sekitar yang bijak seperti menggunakan bahan-bahan terbuang yang boleh diguna semula atau dikitar kembali.

Sehingga kini, sejumlah 100,562 orang pelajar telah menyertai projek ini yang melibatkan 2,805 sekolah seluruh Malaysia.

Pemenang-pemenang bagi tahun 1999 yang dipilih oleh Para Juri ialah:

- SMK Jalan Damai, Bukit Mertajam, Pulau Pinang (hadiah Pertama)
- SMK Lutong, Miri, Sarawak (hadiah Kedua)
- SMK Lembah Keramat, Selangor (hadiah Ketiga)

Debat Alam Sekitar Antara Institut Pengajian Tinggi (IPT) 1999

Jabatan telah menganjurkan debat alam sekitar antara IPT sejak tahun 1990 dan ianya telah menjadi acara tahunan. Pada tahun 1999 dengan penglibatan pertama Universiti Pendidikan Sultan Idris (UPSI) sejumlah 11 buah IPT telah mengambil bahagian. Pertandingan debat tahun 1999 telah diadakan di Universiti Malaysia Sabah (UMS), Teluk Sepanggar, Sabah pada 23-28 Julai 1999. Pertandingan akhir adalah antara Universiti Malaysia Sabah dan Universiti Sains Malaysia, UMS yang diwakili oleh Josephine Oii Beng Haui, Asriyah Abdul Hafid dan Mohd. Shukri Mohd. Ariff telah muncul sebagai johan

Twenty eight environmental camps were conducted throughout the country in 1999. Two participants from each of these camps were invited to a Plantation Ecosystem camp organised by the Golden Hope Plantation at Carey Island on 28 November – 2 December 1999.

Promotion of Environmental Awareness via Environmental-theme Competitions

PRIAS Environment Awareness Project – Scrap Book Competition

The PRIAS project jointly organised by the Department of Environment, the Ministry of Education and the Malaysian Scientific Association and supported by Tetra Pak Sdn. Bhd. aims to instill environmental awareness, responsibility and inculcate good environmental habits among the younger generation such as to reduce, recycle and reuse 'wastes'.

To date, a total number of 100,562 students from 2,805 schools throughout Malaysia had participated in the project.

The winning entries for 1999 selected by a Panel of Judges were:

- SMK Jalan Damai, Bukit Mertajam, Pulau Pinang (1st prize)
- SMK Lutong, Miri, Sarawak (2nd prize)
- SMK Lembah Keramat, Selangor (3rd prize)

Inter-Varsity Environmental Debate 1999

The Inter-Varsity Environmental Debate for public institutions of higher learning had been an annual event since 1990. In 1999, the number of participating institutions increased to eleven with the admission of Universiti Pendidikan Sultan Idris (UPSI). The 1999 debate was held at Universiti Malaysia Sabah (UMS), Teluk Sepanggar, Sabah, on 23-28 July 1999. The grand final was between Universiti Malaysia Sabah and Universiti Sains Malaysia, with the former represented by Josephine Oii Beng Haui, Asriyah Abdul Hafid and Mohd. Shukri Mohd. Ariff emerging the winner. The winning team received a Challenge Trophy from the Deputy Minister of



mengalahkan Universiti Sains Malaysia. Pemenang menerima Piala Pusingan dari Timbalan Menteri Sains, Teknologi dan Alam Sekitar, Y.B. Datuk Abu Bakar Daud dan wang tunai RM3,000.00. Pendebat terbaik ialah Mohd. Shukri Mohd Ariff daripada UMS dan membawa pulang piala Ketua Pengarah Alam Sekitar dan wang tunai RM300.00.

Debat Alam Sekitar Universiti-Universiti ASEAN 1999

Mesyuarat Menteri-Menteri Alam Sekitar dan Pegawai Kanan ASEAN telah memutuskan supaya pada tahun 1998, Malaysia menjadi tuan rumah Debat Alam Sekitar Universiti-Universiti ASEAN untuk menggalakkan pertukaran idea dan buah fikiran mengenai alam sekitar yang dihadapi oleh rantau ini. Jabatan Alam Sekitar telah ditugaskan menganjurkan debat ini dengan kerjasama Universiti Islam Antarabangsa (UIAM). Debat ini telah diadakan di Kampus Petaling Jaya dari 20-25 September 1999 dengan penyertaan enam buah negara dari Cambodia, Indonesia, Filipina, Singapura, Thailand dan Malaysia. Di peringkat akhir pasukan dari Singapura telah mengalahkan pasukan Malaysia dan memenangi Piala Menteri Sains, Teknologi dan Alam Sekitar dan hadiah wang tunai bernilai RM5,000.00. Pendebat terbaik ialah Encik Aizuddin Danian Izham Cheong dari Malaysia dengan membawa pulang piala dan wang tunai RM500.00. Para juri terdiri daripada wakil negara Malaysia, Singapura, Thailand, Indonesia, Cambodia, Filipina dan Myanmar.

Pertandingan Menulis Puisi

Pada tahun 1999, pertandingan menulis Puisi bertemakan alam sekitar telah diadakan bersempena Sambutan Minggu Alam Sekitar Malaysia. JAS telah menerima 157 penyertaan untuk kategori 18 tahun ke atas dan 430 penyertaan untuk kategori 18 tahun ke bawah. Pemenang kategori 18 tahun ke atas ialah Encik Wahid Kasran dari Kajang, Selangor yang menerima wang sejumlah RM1,000.00 dan pemenang kategori 18 tahun ke bawah ialah Cik Syakirah Rashid dari Perak yang menerima wang sejumlah RM800.00.

Science, Technology and the Environment, Y.B. Datuk Abu Bakar Daud and a cash prize of RM3,000.00. The best speaker was Mohd. Shukri Mohd. Ariff from UMS who walked away with a trophy from the Director General of Environment and cash prize of RM300.00.

ASEAN Inter-Varsity Environmental Debate 1999

In 1998, ASEAN Ministers of Environment upon the recommendation of ASEAN Senior Environmental Officials unanimously decided that an ASEAN Inter-Varsity Environmental Debate be held. Malaysia was requested to host the first ASEAN Inter-Varsity Environmental Debate with the objective of promoting exchange of ideas and viewpoints on environmental issues, besides inculcating friendship among ASEAN youth. The Department of Environment was tasked to organise such a debate with the cooperation of the International Islamic University of Malaysia (IIUM). The debate took place at the IIUM campus from 20-25 September 1999 with participation from six countries, Cambodia, Indonesia, Philippines, Singapore, Thailand and Malaysia. In the final debate, the Singapore team edged Malaysia to win the Minister of Science, Technology and the Environment Challenge Trophy and a cash prize of RM5,000.00. The Best Speaker Trophy was given to Mr. Aizuddin Danian Izham Cheong from the Malaysian team. The Panel of Adjudicators comprised of representatives from Malaysia, Singapore, Thailand, Indonesia, Cambodia, Philippines and Myanmar.

Environmental Poetry Competition

The 1999 Environmental Poetry Competition held in conjunction with Malaysia Environment Week received 157 entries for the above 18 category and 430 entries for the below 18 category. The winner for the above 18 category was Mr. Wahid Kasran from Kajang, Selangor who received RM1,000.00 and the winner for the below 18 category was Ms. Shakirah Rashid from Perak, who received RM800.00.



Promosi Kesedaran Alam Sekitar (Bahan-bahan Pendidikan)

Pembangunan Siri Animasi Alam Sekitar

Jabatan telah menghasilkan enam siri animasi bertajuk Pencemaran Udara, Pencemaran Marin, Pencemaran Air, Buangan Merbahaya, Amalan Hijau dan Kepentingan Penjagaan Alam Sekitar pada tahun 1999 untuk digunakan sebagai bahan ceramah di sekolah dan akan ditayangkan di TV tahun 2000.

Penerbitan "Antologi Puisi Alam Sekitar"

Buku Antologi Puisi Alam Sekitar dicetak pada tahun 1999 mengandungi 16 buah puisi alam sekitar yang telah memenangi Pertandingan Menulis Puisi Alam Sekitar Bahasa Malaysia anjuran JAS untuk tempoh tiga tahun yang lepas. Penerbitan ini diedarkan ke semua sekolah, institut pengajian tinggi dan perpustakaan awam.

Promosi Kesedaran Orang Awam (Kempen untuk Orang Awam/Sambutan)

Sambutan Minggu Alam Sekitar Malaysia

Sambutan Minggu Alam Sekitar Malaysia (MASM) telah diadakan pada 21-27 Oktober 1999 di Pulau Langkawi bagi memperingati ulang tahun ke 10 Deklarasi Langkawi mengenai alam sekitar yang ditandatangani oleh Ketua-Ketua Kerajaan Komanwel pada tahun 1989.

YAB Dato' Seri Abdullah Haji Ahmad Badawi Timbalan Perdana Menteri Malaysia telah melancarkan MASM di Dataran Lang, Kuah, Langkawi. Tema sambutan MASM'99 ialah Satu Dekad Memperingati Deklarasi Langkawi, Alam Sekitar Berkualiti Ke Alaf Baru. Antara orang-orang kenamaan yang hadir ialah Menteri Sains, Teknologi dan Alam Sekitar, Timbalan Menteri Sains, Teknologi dan Alam Sekitar, Ahli-ahli Majlis Mesyuarat Kerajaan Negeri yang Bertanggungjawab terhadap alam sekitar, Tuan Yang Terutama Encik Chitsaka Chipaziwa, Pesuruhjaya Tinggi Zimbabwe dan wakil daripada duta-duta di Malaysia.

Promotion of Environmental Awareness (Educational Materials)

Development of Video Animated Series on Environment

Six video animated series pertaining to "Air Pollution", "Marine Pollution", "Water Pollution", "Hazardous Wastes", "Green-Tips" and "Protection of the Environment" were produced in 1999 for use during talks in schools. The series will be on TV in the year 2000.

Publication of "Antologi Puisi Alam Sekitar"

The "Antologi Puisi Alam Sekitar" published in 1999 was a compilation of 16 environmental poems which were winning entries of the Bahasa Malaysia Poetry Writing Competition organised by DOE over the last three years. The publication was circulated to all schools, institutions of higher learning and public libraries.

Promotion of Public Awareness (Public campaigns)

Malaysia Environment Week

The 1999 Malaysia Environment Week (MASM) was held on 21 - 27 October 1999 at Pulau Langkawi to commemorate the tenth anniversary of the Langkawi Declaration on Environment and Development signed by the Commonwealth Heads of Government in 1989.

YAB Dato' Seri Abdullah Haji Ahmad Badawi, Deputy Prime Minister of Malaysia officially launched MASM at Dataran Lang, Kuah, Langkawi. The theme for MASM'99 was "Satu Dekad Memperingati Deklarasi Langkawi; Alam Sekitar Berkualiti Ke Alaf Baru". Among the other dignitaries present were the Minister of Science, Technology and the Environment, the Deputy Minister of Science, Technology and the Environment, State Executive Council Members responsible for environmental affairs, Members of Parliament, State Assemblymen, H.E. Mr. Chitsaka Chipaziwa, the High Commissioner of Zimbabwe and representatives from diplomatic missions in Malaysia.



Antara aktiviti-aktiviti sepanjang minggu tersebut ialah Acara Memperingati Deklarasi Langkawi, Le-Enviro Tour MASM'99, Pameran dan Pertandingan Alam Sekitar, Gotong-royong, Pertandingan Rekacipta Taman Alam Sekitar, Island Envirohunt dan Khidmat Masyarakat/Jamboree.

"Jualan But-Kereta"

Semasa acara Larian Hijau'99, di stadium MPPJ, pada 11 April 1999 yang telah dianjurkan oleh Kementerian Sains, Teknologi dan Alam Sekitar, JAS telah menganjurkan Jualan But-Kereta untuk menggalakkan orang awam untuk mengamalkan konsep gunasemula dengan menjual barangan terpakai seperti buku, majalah, tali leher, barang-barang rumah dan sebagainya. Sambutan dari orang awam amat menggalakkan dan aktiviti ini dijangka akan diadakan masa akan datang.

Promosi Kesedaran Alam Sekitar (Media Masa)

Kerjasama dari media di TV dan radio sepanjang tahun telah membantu Jabatan untuk menganjurkan beberapa program-program bertemakan alam sekitar seperti Global (TV2), Khutbah Jumaat dari Masjid Negara (TV1), Selamat Pagi Malaysia (TV1) dan Malaysia Hari Ini (TV3). Kuiz Kesedaran Alam Sekitar untuk kanak-kanak dan orang awam dikeudarkan dengan isu alam sekitar spesifik setiap Khamis dan Sabtu di Radio 1.

Media cetak juga memainkan peranan yang aktif dalam promosi kesedaran alam sekitar berterusan dan suratkhbar utama di Malaysia telah memperkenalkan ruang alam sekitar setiap minggu dan ruangan khas tentang alam sekitar semasa sambutan Minggu Alam Sekitar Malaysia, Hari Bumi dan Hari Alam Sekitar Sedunia.

Anugerah dan Pengiktirifan Alam Sekitar

Anugerah Langkawi

Pada tahun 1999 anugerah ini diberikan kepada YM Tengku Datuk Zainal Adlin bin Tengku

Among the highlights of the week were a ceremony to rekindle the spirit of the 1989 Langkawi Declaration on Environment and Development, Le-Enviro Tour MASM '99, Environmental Exhibition and Competition, Gotong-royong Clean-up activities, Enviro-Park Competition, Island Envirohunt and Community Service Jamboree.

"Car Boot Sale"

In conjunction with Green Run '99, organised by the Ministry of Science, Technology and Environment at Stadium MPPJ, on 11 April 1999, DOE organised a "Car Boot Sale" to promote the concept of reduce, recycle and reuse of items such as books, magazines, neckties, clothings, household goods, etc. The public response was encouraging and more such activities are expected to be organised.

Promotion of Environmental Awareness (Mass Media)

Throughout the year, several interactive environmental-themed sessions on TV and radio took place such as "Global" (TV2), "Khutbah Jumaat" from Masjid Negara (TV1), "Selamat Pagi Malaysia (TV1)" and "Malaysia Hari Ini (TV3)". Environmental awareness quizzes for school children and the public were aired every Thursdays and Saturdays over Radio 1.

The print media also played an active role in promoting environmental consciousness on a regular basis. Major newspapers had weekly Environment Columns and special feature write-up during Malaysia Environment Week, Earth Day and World Environment Day.

Environmental Awards and Recognition

Langkawi Award

The 1999 Langkawi Award was awarded to YM Tengku Datuk Zainal Adlin bin Tengku Mahmood in recognition of his significant contribution to environmental protection and nature conservation in Malaysia. The award consisted of a RM10,000.00 cash prize, a



Mahmood ke atas jasa beliau yang signifikan terhadap perlindungan semulajadi alam sekitar. Anugerah ini merupakan wang tunai sejumlah RM10,000.00, sijil yang ditandatangani oleh Yang di Pertuan Agong dan plak Menteri Sains, Teknologi dan Alam Sekitar.

Anugerah Warga Alam

Anugerah Warga Alam yang baru diperkenalkan pada tahun 1999 merupakan anugerah untuk orang awam yang telah menyumbang kepada pengurusan alam sekitar dalam negara. Penerima-penerima anugerah Warga Alam seramai 8 orang telah menerima anugerah masing-masing dari Menteri Sains, Teknologi dan Alam Sekitar di Tugu Deklarasi Langkawi, Pantai Chenang pada 22 Oktober 1999.

Anugerah Kewartawanan Alam Sekitar ICI/CCM (EJA)

Anugerah Kewartawanan Alam Sekitar ICI/CCM telah diperkenalkan untuk memberi pengiktirafan kepada wartawan alam sekitar bagi menghargai sumbangan bermakna mereka menerusi laporan-laporan di media cetak, media elektronik dan fotografi. Ketua Pengarah Alam Sekitar adalah ahli panel hakim bagi anugerah ini.

Y.B Timbalan Menteri Sains, Teknologi dan Alam Sekitar telah melancarkan dengan rasminya laman web EJA pada 11 Oktober 1999 di Taman Teknologi Malaysia, Bukit Jalil, Kuala Lumpur.

Anugerah Hibiscus Perdana Menteri

Anugerah ini telah diperkenalkan pada tahun 1996 sebagai anugerah terulung anugerah alam sekitar sektor industri dan perniagaan di Malaysia. Anugerah ini telah dinaikkan taraf kepada "Anugerah Hibiscus Perdana Menteri" setelah dipersetujui oleh YAB Perdana Menteri Malaysia pada tahun 1999.

Pemenang anugerah ini menerima plak, sijil dan kebenaran menggunakan logo anugerah untuk publisiti. Pada tahun 1999, "Exceptional Award" telah diberikan kepada Fairchild Semi-

certificate signed by His Majesty Yang Di Pertuan Agong and a plaque by the Minister of Science, Technology and the Environment.

Green Citizen Award

The Green-Citizen Award was first introduced in 1999 in recognition of voluntary acts or deeds towards environmental protection and conservation in the country. Eight (8) Malaysian citizens were nominated and received the awards from the Minister of Science, Technology and Environment at the Langkawi Declaration Monument in Pantai Chenang, Langkawi on 22 October 1999.

ICI/CCM Environmental Journalism Award (EJA)

The Director-General of Environment was a member of the Panel of Judges for the ICI/CCM Environmental Journalism Award for 1999 to give recognition to Malaysian environmental journalists for providing balanced and responsible environmental reporting through the print and electronic media.

The Deputy Minister of Science, Technology and the Environment officially launched the EJA website on 11 October 1999 at the Malaysia Technology Park at Bukit Jalil, Kuala Lumpur.

Prime Minister Hibiscus Award

This prestigious Green Hibiscus award was introduced since 1996 as a premier private sector environmental award for business and industry in Malaysia. It was renamed the "Prime Minister Hibiscus Award" after obtaining the consent of the Prime Minister of Malaysia in 1999.

The winner(s) receive a plaque, certificate and the entitlement to use the Hibiscus logo for publicity purposes. The 1999 Exceptional Award was given to Fairchild Semi-Conductor at Bayan Lepas Free Trade Zone, Pulau Pinang, and eighteen others received the Notable Awards.



Conductor di Bayan Lepas Zon Perindustrian Bebas, Pulau Pinang dan 8 lagi menerima "Notable Awards".

Promosi Kesedaran Alam Sekitar Dengan Kerjasama Sektor Swasta

Sepanjang tahun, JAS telah dijemput menyertai dan bersama-sama menganjurkan beberapa aktiviti promosi alam sekitar seperti pameran, seminar, ceramah, dialog, pertandingan dan projek khidmat komuniti bersama badan korporat, pertubuhan bukan kerajaan dan sektor industri.

Promosi Kesedaran Alam Sekitar (Kerjasama Antarabangsa)

"Junior Eco-Club" di Jepun

Pada tahun 1999, Jabatan telah dijemput untuk menghantar dua orang kanak-kanak yang terlibat aktif dalam aktiviti-aktiviti alam sekitar di sekolah untuk menyertai program ini di Tokyo, Jepun dari 4-6 Jun 1999 sempena Sambutan Hari Alam Sekitar Sedunia. Sekumpulan kanak-kanak yang berpotensi telah ditemuduga dan hanya 2 orang kanak-kanak dari Kuala Lumpur telah terpilih untuk menyertai program ini. Mohd. Ashaari Mohd. Rahmat dan Atheera Nur Ibrahim telah terpilih untuk mewakili Malaysia dalam persidangan ini dan mereka telah diiringi oleh Puan Norliza Jannes, Pegawai dari JAS.

Perwakilan Muda Alam Sekitar UNEP

JAS telah menyelaras penyertaan seorang pelajar berumur 22 tahun iaitu Encik Sucharit Pongprakyun dari Universiti Putra Malaysia ke Persidangan Sambil Belajar di Australia yang bermula dengan mesyuarat di pejabat UNEP di Bangkok. Tiket penerbangan beliau ditaja oleh Sistem Penerbangan Malaysia ke Bangkok dan tiket penerbangan ke Sydney, Australia di biyai oleh UNEP.

Promoting Awareness in Collaboration with the Private Sector

Throughout the year, DOE was invited to participate and jointly organised a number of environmental promotion activities such as exhibitions, seminars, talks, dialogues, competitions and community services projects in collaboration with corporate bodies, NGOs and the private industrial sector.

Promotion of Environmental Awareness (International Cooperation)

Junior Eco-Clubs in Japan

DOE was invited to participate in the Asian Junior Eco Club Conference held in Tokyo, Japan on 4-6 June 1999 in conjunction with World Environment Day 1999. Potential candidates were shortlisted and two students were selected, namely Mohd. Ashaari Mohd. Rahmat (14 years old) and Atheera Nur Ibrahim (10 years old), to represent Malaysia at the Conference. Ms Norliza Jannes from DOE chaperoned the children at the Conference.

UNEP Young Environmental Envoys Project

DOE facilitated the participation of a 22 year old student of Universiti Putra Malaysia, Mr. Sucharit Pongprakyun in the project which started with a meeting of all selected student envoys from different countries at the UNEP Office in Bangkok and a Conference Study Tour in Australia. Malaysian Airlines sponsored the round trip ticket to Bangkok, while UNEP sponsored the round trip ticket to Sydney, Australia.



SEBARAN MAKLUMAT

Penerbitan

Sebaran maklumat alam sekitar terus memainkan peranan yang penting dalam mempromosikan kesedaran alam sekitar dan peningkatan pengurusan alam sekitar. Berbagai penerbitan alam sekitar telah diterbitkan seperti Laporan Kualiti Alam Sekeliling, majalah IMPAK, majalah ERA Hijau, garis panduan, risalah dan poster. Penerbitan-penerbitan ini telah diedarkan kepada pelbagai kumpulan sasaran. Pada tahun 1999, sejumlah 160,320 agensi dalam dan luar negara serta individu yang terdiri dari pembuat keputusan, institut pendidikan, perpustakaan dan pertubuhan bukan kerajaan lain-lain yang ada dalam senarai JAS telah menerima penerbitan ini (Rajah 6.0).

Pada tahun 1999, penerbitan khas berjudul 20 Tahun Kecemerlangan Pengurusan Alam Sekitar Di Malaysia 1975-1995 telah diterbitkan. Sebanyak 3 buah buku panduan alam sekitar iaitu, "Handbook on Metal Finishing, Raw Natural Industri and Crude Palm Oil" yang telah disediakan di bawah biayaan DANCED iaitu Projek "Capacity Building". (Jadual 6.0)

Sebaran Maklumat Alam Sekitar

Pada tahun 1999, sejumlah 2,263 pertanyaan untuk maklumat alam sekitar telah diterima melalui pengguna perpustakaan, diikuti oleh surat-surat, e-mail dan laman-web JAS. (Rajah 6.1)

Sistem Rujukan Antarabangsa untuk Sumber-Sumber Maklumat mengenai Alam Sekitar (INFOTERRA)

Di bawah jaringan INFOTERRA yang diselenggarakan oleh JAS, sejumlah 29 pertanyaan telah diterima dan diproses di mana 17 datangnya daripada Nairobi, Thailand, United Kingdom, Hong Kong, USA, Samoa, Afrika Selatan, Jepun, Jerman, India, Perancis, Finland, New Zealand, Uganda, Indonesia, Singapura dan Denmark. Pertanyaan dari

ENVIRONMENTAL INFORMATION

Publications

Environmental information dissemination plays a vital and major role in promoting environmental consciousness for the improvement of environmental management. Various environmental reading materials were published in 1999, such as the Environmental Quality Report, the IMPAK magazine, the ERA Hijau magazine, guidelines, pamphlets and posters for distribution to various target groups. In 1999, a total of 160,320 local and foreign agencies and individuals such as decision-makers, educational institutions, libraries and non-governmental organizations were on the mailing list. (Figure 6.0).

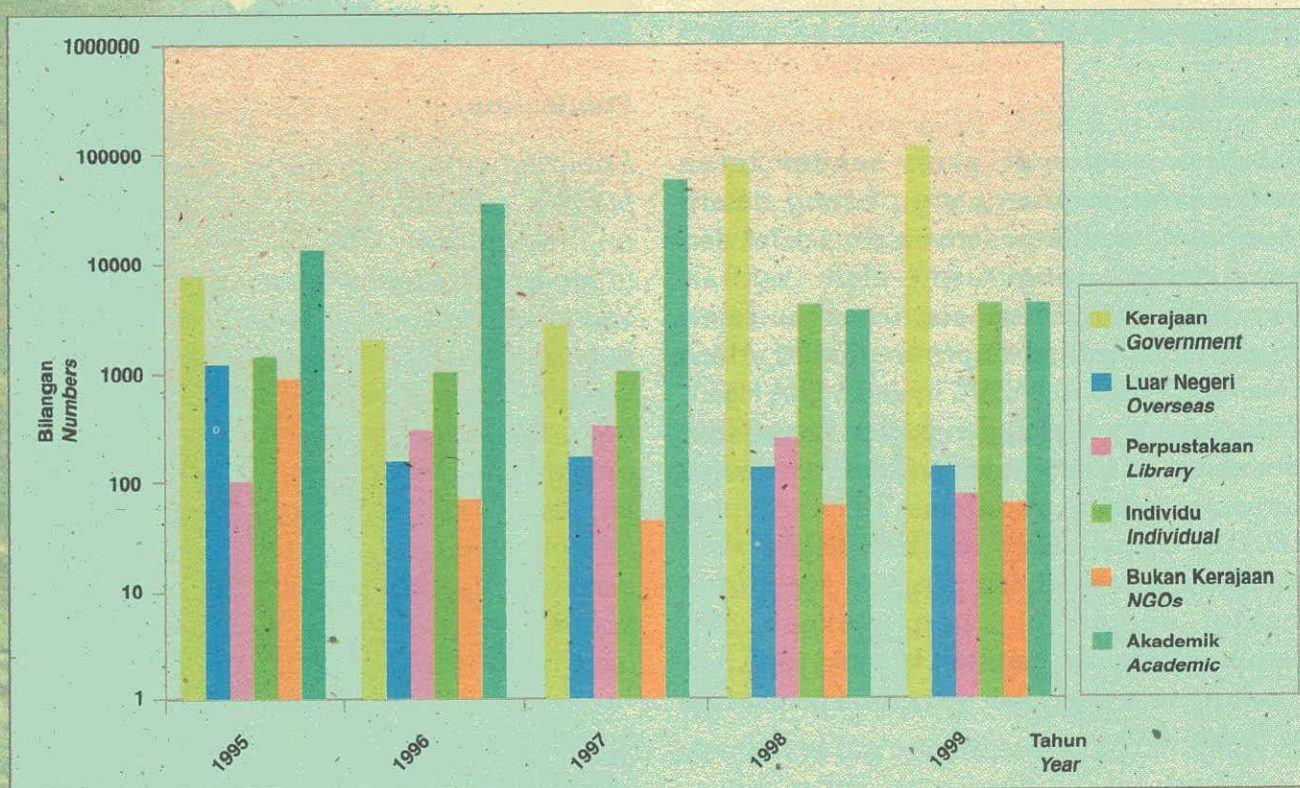
A special publication entitled "20 Years Environmental Management Excellence In Malaysia 1975-1995" was published in 1999. Three Environmental Handbooks on Metal Finishing, Raw Natural Rubber Industry and Crude Palm Oil Mills were also prepared under the DANCED sponsored Capacity Building Project. (Table 6.0).

Environmental Information Dissemination

In 1999, a total of 2,263 requests for environmental information were received, principally from Enviro-Library users, followed by request through letters, e-mails and via the DOE homepage. (Figure 6.1).

International Referral System for Sources of Environmental Information (INFOTERRA)

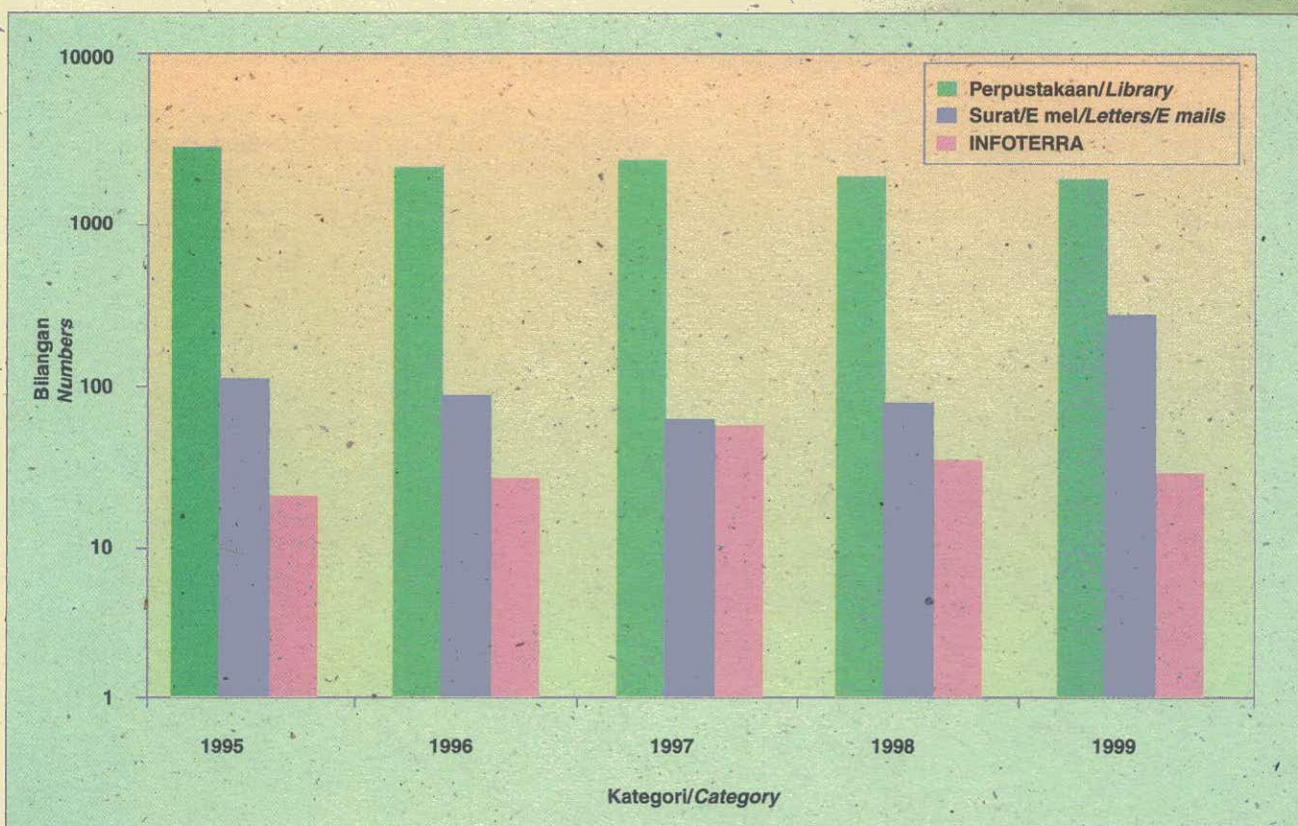
Through the Malaysian INFOTERRA network based at DOE, a total of 29 queries were received and processed in 1999, of which 17 came from Nairobi, Thailand, United Kingdom, Hong Kong, USA, Samoa, South Africa, Japan, Germany, India, France, Finland, New Zealand, Uganda, Indonesia, Singapore and Denmark. Queries were also received from DOE staff and other government departments and institutions. (Figure 6.2). The type of enquiries processed included information



Rajah 6.0 Jabatan Alam Sekitar: Penyebaran Terbitan-Terbitan Alam Sekitar, 1995-1999
Figure 6.0 Department of Environment: Dissemination of Environmental Publications, 1995-1999

Jadual 6.0 Jabatan Alam Sekitar: Senarai Penerbitan, 1999
Table 6.0 Department of Environment: List of Publications, 1999

Bil.	Tajuk	No.	Title
1.	Risalah: <ul style="list-style-type: none"> Amalan Hijau: rumah, sekolah, kompleks membeli dan pejabat Pencemaran Air INFOTERRA Hentikan Pelupusan Haram Buangan Berbahaya Buangan Berbahaya dan Anda. Profil JAS 	1.	Brochure: <ul style="list-style-type: none"> Greentips: at home, school, shopping complex and office Water Pollution INFOTERRA Stop Illegal Dumping of Hazardous Wastes Hazardous Wastes and You DOE Profile
2.	Buku Kecil: <ul style="list-style-type: none"> Pembakaran Sifar "Implementation of Basel Convention in Malaysia" 	2.	Booklet: <ul style="list-style-type: none"> "Pembakaran Sifar" Implementation of the Basel Convention in Malaysia
3.	Buku Garis panduan: <ul style="list-style-type: none"> "Industry Specific Booklet: Metal Plating" "Industry Specific Booklet: Palm Oil Mill" "Industry Specific Booklet: Raw Natural Rubber" Garis panduan Penguatkuasaan Garis panduan Penyediaan Rancangan Kontingensi Tempatan Peringkat Pertama (Tier 1) 	3.	Guidelines: <ul style="list-style-type: none"> Industry Specific Booklet: Metal Plating Industry Specific Booklet: Palm Oil Mill Industry Specific Booklet: Raw Natural Rubber "Garis panduan Penguatkuasaan" "Garis panduan Penyediaan Rancangan Kontingensi Tempatan Peringkat Pertama (Tier 1)"
4.	Laporan Kualiti Alam Sekeliling 1998	4.	Laporan Kualiti Alam Sekeliling 1998
5.	"Environmental Quality Report 1998"	5.	Environmental Quality Report 1998
6.	Majalah Sukutahunan <ul style="list-style-type: none"> IMPAK ERA Hijau 	6.	Quarterly Magazines <ul style="list-style-type: none"> IMPAK ERA Hijau



Rajah 6.1 Jabatan Alam Sekitar: Perkhidmatan Maklumbalas Pertanyaan, 1995-1999
Figure 6.1 Department of Environment: Query Response Services, 1995-1999

pengguna tempatan sebahagian besar datangnya dari kakitangan Jabatan dan sebahagian kecil daripada lain-lain agensi dan institusi kerajaan. (Rajah 6.2). Maklumat yang dicari termasuklah pengurusan alam sekitar di Malaysia, undang-undang dan peraturan, aktiviti-aktiviti kesedaran dan pendidikan alam sekitar, perbandaran, pengurusan buangan toksik dan berbahaya, pembakaran terbuka, pencemaran udara dan air juga EIA.

Perkhidmatan Perpustakaan-Enviro

Sehingga akhir 1999, sebanyak 30,833 sumber-sumber maklumat yang boleh didapati di perpustakaan, termasuklah buku-buku, laporan, kertas seminar, majalah dan risalah. Keratan akhbar mengenai alam sekitar meningkat dan sejumlah 59,400 keratan akhbar telah dikumpulkan sejak 1975 (Rajah 6.3).

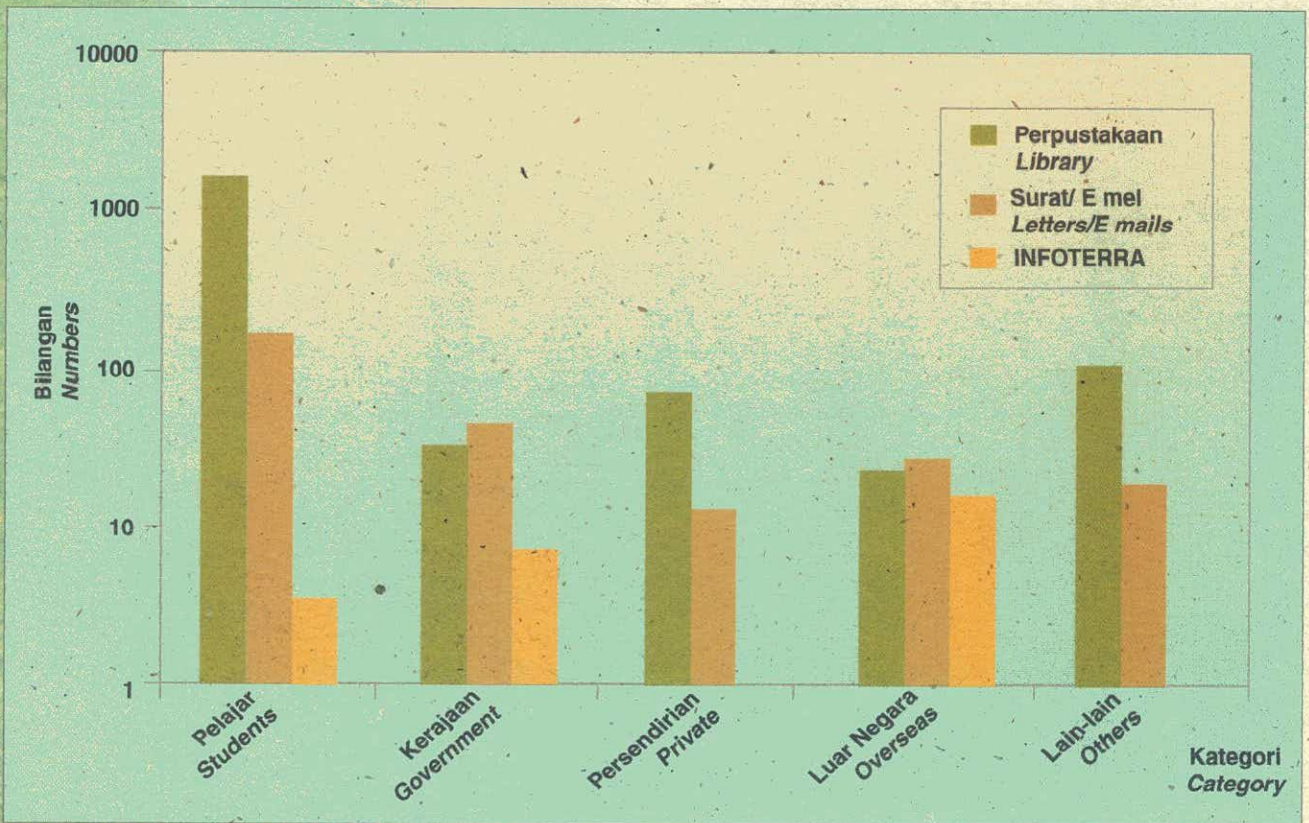
Rajah 6.4 menunjukkan bilangan pengguna perpustakaan, 88% adalah pelajar, menunjukkan peningkatan penglibatan dan kesedaran isu-isu alam sekitar di kalangan pelajar peringkat menengah dan institusi pengajian tinggi.

pertaining to environmental management, laws and regulations, environmental awareness and education activities, urbanization issues, toxic and hazardous wastes management, open burning, air and water pollution and EIA.

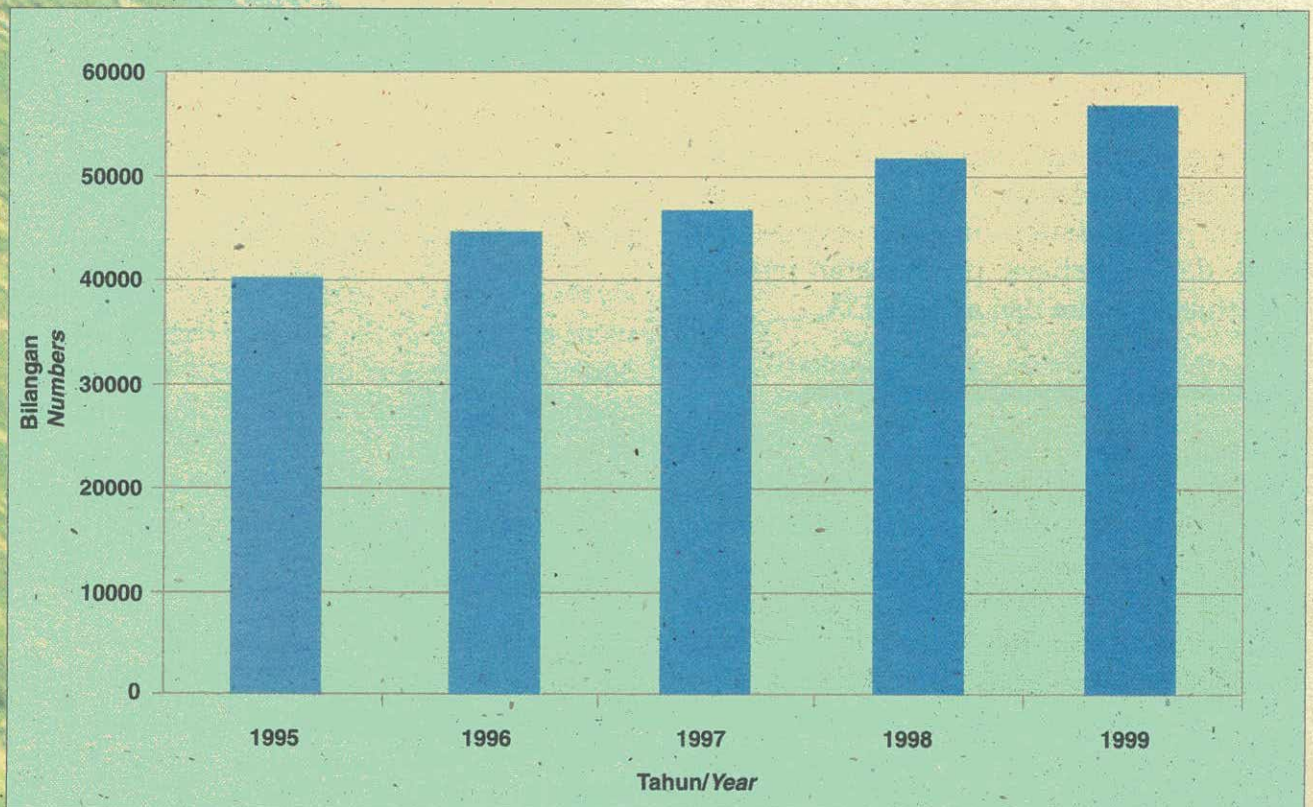
DOE Enviro-Library Services

By the end of 1999, 30,883 reference materials were available in the library. These included books, reports, seminar papers, magazines, journals and brochures. Local press coverage of environmental issues remained unabated and the number of newspaper clippings compiled since 1975 increased to 59,400 (Figure 6.3).

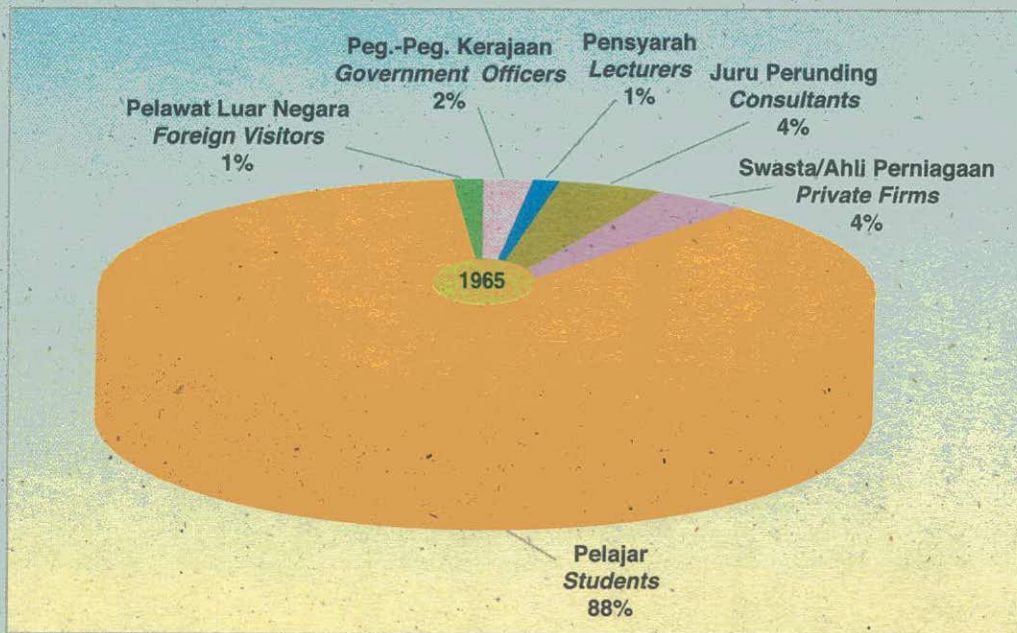
Figure 6.4 shows the number of library users in 1999, 88% of which were students, an indication of increasing interest and awareness of environmental issues among students at secondary level and institutions of higher learning.



Rajah 6.2 Jabatan Alam Sekitar: Kategori Permohonan Maklumat, 1999
 Figure 6.2 Department of Environment: Category of Information Applications, 1999



Rajah 6.3 Jabatan Alam Sekitar: Bilangan Keratan Akhbar Mengenai Alam Sekitar, 1995-1999
 Figure 6.3 Department of Environment: Number of Newspaper Clippings on Environment, 1995-1999



Rajah 6.4 Jabatan Alam Sekitar: Pengguna-pengguna Perpustakaan Jabatan Alam Sekitar mengikut Kategori, 1999

Figure 6.4 Department of Environment: Category of Library Users, 1999

Taklimat/Ceramah Alam Sekitar

Pelawat dalam dan luar negara JAS telah diterima dan sambut oleh pegawai-pegawai Unit Perkhidmatan Maklumat. Sepanjang tahun 1999, 13 sesi taklimat telah diberikan kepada pelawat di Jabatan dari dalam dan luar negeri yang terdiri daripada guru, pelajar university dan sekolah menengah, eksekutif sektor swasta dan pelawat luar negara.

Environmental Briefings

Local and foreign visitors to DOE were received and attended to by officers of the Information Services Unit. In 1999, thirteen briefings were given to local and foreign visitors comprising of teachers, university students and secondary school students, private sector corporate executives as well as foreign visitors.



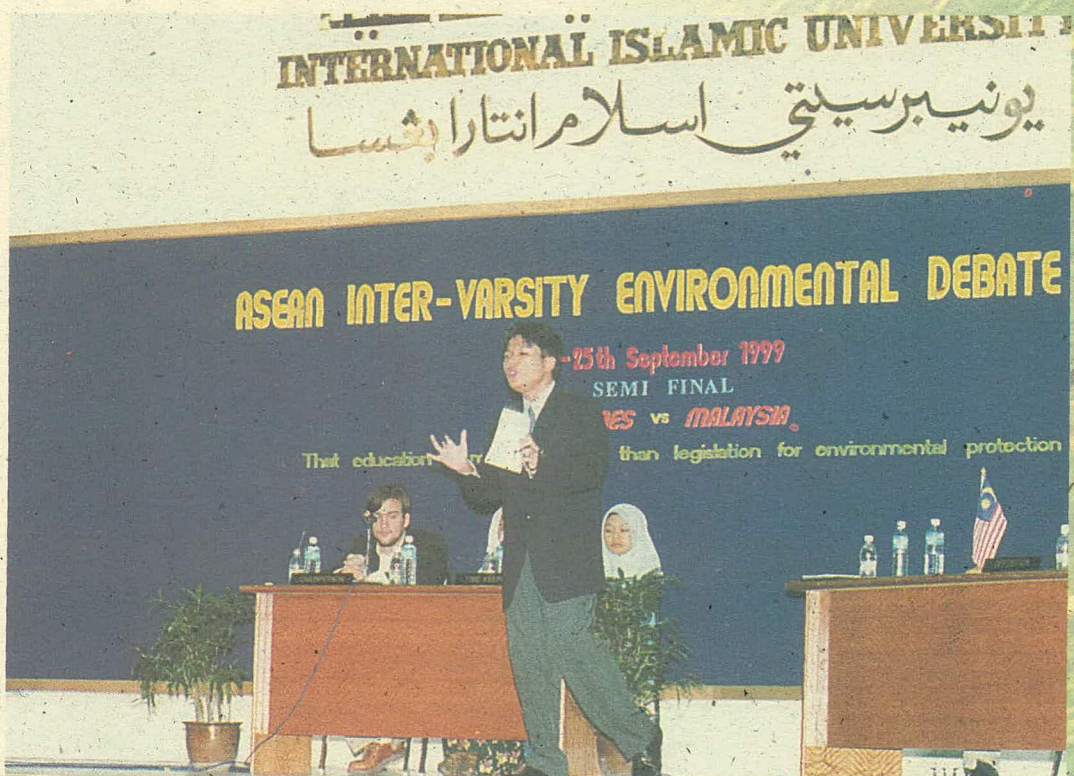
**Majlis Pelancaran Minggu Alam Sekitar Malaysia 1999 oleh
Y.A.B. Timbalan Perdana Menteri Malaysia**
*Launching of Malaysia Environmental Week, 1999 by the
Rt. Honourable Deputy Prime Minister of Malaysia.*



**Majlis Memperingati Ulang Tahun Ke10 Deklarasi Langkawi
Mengenai Alam Sekitar & Pembangunan 1989**
*In Commemoration of the Tenth Anniversary of the Langkawi Declaration on
Environment and Development 1989*

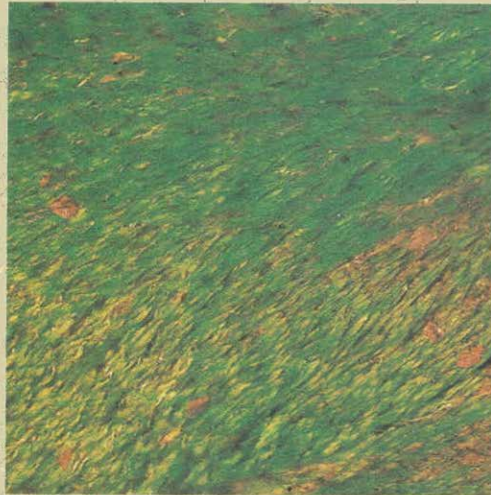


Anugerah Langkawi 1999
Langkawi Award 1999



Debat Pertama Alam Sekitar Universiti-Universiti ASEAN 1999
ASEAN Inter-Varsity Environmental Debate 1999

Bab 7



Chapter 7

HAL EHWAL ANTARABANGSA

PENGENALAN

Hal Ehwal Alam Sekitar menjadi perkara yang penting dalam agenda pembangunan global dan penglibatan Malaysia di dalam arena hal ehwal alam sekitar antarabangsa menjadi semakin penting. Program-program dan aktiviti-aktiviti alam sekitar di peringkat antarabangsa, serantau dan dua hala semakin di pertingkatkan untuk memenuhi cabaran-cabaran baru.

Dari bulan Januari hingga Disember 1999, Jabatan Alam Sekitar telah menguruskan penglibatan pegawai JAS dalam 47 mesyuarat dan persidangan dan 17 bengkel, seminar, forum dan program latihan. Penglibatan ini bertujuan untuk berkongsi pengalaman dan pertukaran maklumat dan yang paling penting ialah mempereratkan kerjasama di peringkat dua hala, serantau dan antarabangsa.

Sebanyak 17 misi alam sekitar melibatkan 139 delegasi dari negara-negara seperti USA, UK, Denmark, Papua New Guinea, Vietnam, Canada, Mongolia dan Bhutan telah melawat JAS untuk berkongsi dan bertukar-tukar maklumat dan pengalaman dalam pelbagai perkara berkaitan alam sekitar yang berkepentingan global dan serantau.

KERJASAMA DUA HALA

Malaysia-Canada

Menerusi hubungan baik dengan Canadian International Development Agency (CIDA), Jabatan Alam Sekitar telah menyelaras satu Misi Teknikal Pengurusan Kebakaran Hutan ke Canada dari 25 Julai hingga 4 Ogos 1999. Jabatan Bomba dan Penyelamat, sebagai agensi utama yang bertanggungjawab dalam pengurusan kebakaran di Malaysia telah menghadiri misi tersebut termasuk ahli-ahli negara ASEAN yang lain. Ianya berfaedah bagi membolehkan negara-negara peserta bertukar pandangan di dalam polisi mencegah kebakaran, undang-undang, organisasi dan

INTERNATIONAL ENVIRONMENTAL AFFAIRS

INTRODUCTION

As environmental concerns gain more prominence in the global agenda Malaysia's participation in the international environmental arena becomes more important. International, regional and bilateral environmental programmes and activities were intensified to meet these new challenges.

From January to December 1999, the Department of Environment facilitated the participation of DOE officials at 47 meetings and conferences and 17 workshops, seminars, forum and training courses. Such participation was beneficial for the sharing of experience and information exchange and more importantly, enhancing networking among officials at the bilateral, regional and international level.

A total of 17 environmental missions-involving 139 officials from USA, UK, Denmark, Papua New Guinea, Vietnam, Canada, Mongolia and Bhutan visited DOE to exchange and share knowledge and experiences on various environmental matters of global and regional interest.

BILATERAL COOPERATION

Malaysia-Canada

Under the auspices of the Canadian International Development Agency (CIDA), the Department of Environment facilitated a Forest Fire Management Technical Mission to Canada from 25 July to 4 August 1999. The Malaysian Fire and Rescue Department, the leading agency responsible for fire management in Malaysia, participated in the mission which included other ASEAN member countries. The mission brought about a useful exchange of views on fire policy, legislation, organisation and coordination as well as the latest fire-fighting technology.



kerjasama serta perkembangan terkini teknologi mencegah kebakaran.

Malaysia-German

Satu Projek Kerjasama Teknikal di bawah GTZ-German dalam bidang Kawalan Pencemaran Udara telah dimulakan seperti kawalan pelepasan daripada kenderaan bermotor, kawalan pelepasan dari aktiviti-aktiviti industri dan bidang pembangunan pengurusan kualiti udara.

Malaysia-Indonesia

Pada tahun 1999 kerjasama dua hala antara Malaysia dan Indonesia di bawah Jawatankuasa Bersama Bantuan dan Bencana terus dimantapkan. Jawatankuasa ini bertemu di Kuala Lumpur pada 6-7 Mei 1999 bagi membincangkan mengenai Standard Prosedur Operasi (SOP) bagi Pencegahan Bencana. Jabatan Alam Sekitar telah terlibat secara aktif dalam perbincangan dengan memberi input tentang perkara mengenai isu-isu pencegahan bencana jerebu.

Malaysia-Singapura

Mesyuarat Tahunan Dua Hala antara Menteri Alam Sekitar kedua-dua negara telah diadakan di Putrajaya pada 8-11 April 1999. Kedua Menteri telah bersetuju agar ke dua-dua negara meneruskan kerjasama penguatkuasaan kenderaan yang melepaskan asap hitam. Kedua-dua negara bersetuju kerjasama terhadap menggunakan standard pelepasan EC dan mencari jalan bagaimana untuk mempromosikan kegunaan enjin minyak 2T yang melepaskan asap yang sedikit.

Kedua-dua Menteri juga berbincang mengenai isu jerebu, memuji kerja cemerlang Jawatankuasa Petugas Jerebu ASEAN dan mencadangkan aktiviti-aktiviti dalam Pelan Tindakan Jerebu Serantau dipertingkatkan.

Mesyuarat ke 14 Pegawai-Pegawai Kanan Jawatankuasa Bersama Malaysia-Singapura Mengenai Alam Sekitar (MSJCE) telah diadakan di Singapura pada 3-4 November 1999. Antara isu yang dibincangkan adalah:

Malaysia-Germany

A Technical Cooperation Project on Air Pollution Control in coordination with GTZ-Germany was initiated which included vehicular emission control, industrial emission control and the development of Air Quality Management Areas.

Malaysia-Indonesia

Bilateral cooperation between Malaysia and Indonesia under the Joint Committee on Disaster Cooperation and Assistance took on a firmer footing in 1999. The Joint Committee met in Kuala Lumpur on 6-7 May 1999 to deliberate on the Standard Operating Procedure on Disaster Prevention. The Department of Environment participated actively in the discussion providing input on matters pertaining to issues on haze disaster prevention.

Malaysia-Singapore

The Annual Malaysia-Singapore Bilateral Meeting between the Ministers of Environment of both countries was held in Putrajaya on 8-11 April 1999. On vehicular emission control, the Ministers agreed that both countries would continue to work closely to enforce against vehicles caught emitting black smoke. Both countries also agreed to work towards adopting EC emission standards and look into ways to promote the use of low-smoke 2T engine oil for motorcycles.

The Ministers also discussed the haze issue, commended the good work of the ASEAN Haze Technical Task Force and strongly recommended that the activities under the Regional Haze Action Plan be further stepped up.

The 14th Senior Officials Meeting of the Malaysia-Singapore Joint Committee on the Environment (MSJCE) was held in Singapore on 3-4 November 1999. Among the issues discussed were:



- Kualiti Air di Tambak Johor
- Pengurusan Kimia dan sisa buangan
- Kawalan Pelepasan Kenderaan
- Kerjasama untuk mencegah pelupusan haram sisa minyak

Malaysia-Amerika Syarikat-Asia Rakankongsi Alam Sekitar (US.AEP)

Menerusi hubungan baik dengan US-AEP, sekumpulan pakar dari 'US Environment Protection Agency' telah membuat lawatan ke JAS pada April dan Julai 1999. Tujuan lawatan ialah bagi membantu dalam penyediaan rangkakerja odit alam sekitar dan skim pendaftaran Penilaian Kesan kepada Alam Sekeliling untuk Malaysia.

USEAPA juga membantu JAS dalam melaksanakan program odit ke atas sistem dan alat stesen bagi Program Pengawasan Kualiti Udara yang ditubuhkan oleh JAS mengikut standard antarabangsa.

KERJASAMA SERANTAU

Kumpulan Kerja ASEAN Mengenai Perjanjian Alam Sekitar yang Pelbagai Hala (MEA)

Malaysia telah mempengerusikan mesyuarat pertama Kumpulan Kerja ASEAN Mengenai Perjanjian Alam Sekitar yang Pelbagai Hala pada 17-18 Mei 1999 di Kuala Lumpur. Kumpulan Kerja bersetuju untuk mengadaptasikan satu set program dan aktiviti di bawah Pelan Tindakan Strategik Komponen Alam Sekitar di bawah Pelan Tindakan Hanoi (1999-2004). Kumpulan Kerja telah ditugaskan mengawasi program dan aktiviti-aktiviti seperti berikut:

- Protokol Montreal Mengenai Bahan-bahan Pemusnah Lapisan Ozon
- Konvensyen 'Framework UN' mengenai 'Climate Change' dan Protokol Kyoto
- Konvensyen Basel mengenai Kawalan Pergerakan Buangan Terjadual Merentas Sempadan dan Pelupusannya
- Konvensyen mengenai 'Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade'

- Water Quality in the Straits of Johor
- Sound Management of Chemicals and Wastes
- Control of Vehicular Emission
- Cooperation to prevent illegal dumping of oil sludge

Malaysia-United States-Asia Environmental Partnership (US.AEP)

Under the auspices of US-AEP, an expert team from the US Environment Protection Agency (USEPA) visited DOE in April and July 1999 to assist in the formulation of an environmental audit framework and an EIA registration scheme for Malaysia.

USEPA also assisted DOE to carry out a system and instrumentation audit of the Air Quality Monitoring Programme established by DOE and concluded that it was in accordance with international standards.

REGIONAL COOPERATION

ASEAN Working Group on Multilateral Environmental Agreements (MEA)

Malaysia hosted the First Meeting of the ASEAN Working Group on Multilateral Environmental Agreements on 17-18 May 1999 in Kuala Lumpur. The Working Group agreed to adopt a set of programmes and activities as outlined in the Strategic Plan of Action on the environment under the Hanoi Action Plan (1999-2004). The Working Group was also entrusted to look into the programmes and activities of the following:

- Montreal Protocol on Substances that Deplete the Ozone Layer
- UN Framework Convention on Climate Change and Kyoto Protocol
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal
- Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade



- 'Intergovernmental Negotiating Committee for an International Legally Binding Instrument for Implementing International Action on Certain Persistent Organic Pollutants'

Tumpuan juga diberi ke atas 'capacity building', jaringan kerja dan pertukaran maklumat antara pusat tumpuan ahli negara ASEAN. Isu-isu mengenai kesefahaman bersama mengenai MEAs juga dibincangkan.

Mesyuarat Kedua Kumpulan Kerja MEA telah diadakan pada 18-19 November 1999 di Kuala Lumpur semasa Kumpulan ini mengulas dan membincangkan kemajuan bidang aktiviti yang baru.

Mesyuarat Pasukan Petugas Teknikal ASOEN Mengenai Jerebu (HTTF)

Pada 5 Julai 1999, Mesyuarat ke 13 Pasukan Petugas Teknikal ASOEN Mengenai Jerebu (HTTF) telah diadakan di Putrajaya, sebelum Mesyuarat ke 7 Mesyuarat Menteri-Menteri Alam Sekitar ASEAN Mengenai Jerebu. Mesyuarat telah membincangkan perkara-perkara berikut:

- Perkembangan Pelan Tindakan Jerebu Serantau (RHAP) yang meliputi Langkah-langkah Pencegahan, Mekanisma Pengawasan Serantau dan Kebolehpayaan Melawan Kebakaran
- Laporan oleh Kumpulan Kerja-Kumpulan Kerja yang berkaitan mengenai "Sub Regional Fire Fighting Arrangements" (SRFA) untuk Sumatra dan Borneo
- Perkembangan dalam Operasi dan Pelaksanaan RHAP oleh RETA
- Bantuan Antarabangsa dan kerjasama mengawal kebakaran tanah dan hutan

Mesyuarat Bersama Pasukan Petugas Teknikal ASOEN mengenai Jerebu (HTTF) bagi Penyelarasan Pencegahan Kebakaran sub-Serantau (SRFAs) bagi Borneo dan Sumatera

Kumpulan Kerja bagi Penyelarasan Pencegahan Kebakaran Sub-Serantau (SRFAs) bagi Borneo dan Sumatera bertemu secara

- *Intergovernmental Negotiating Committee for an International Legally Binding Instrument for Implementing International Action on Certain Persistent Organic Pollutants.*

The activities of the group were to focus on capacity building, networking and information exchange among the focal points of the ASEAN member countries. Issues of common understanding on the MEAs were also dealt with.

The second MEA Working Group Meeting was held on 18-19 November 1999 in Kuala Lumpur during which the Group reviewed its progress and discussed new areas of activities.

ASOEN Haze Technical Task Force Meeting (HTTF)

On 5 July 1999, the 13th Meeting of ASEAN Senior Officials on the Environment (ASOEN) Haze Technical Task Force (HTTF) was held in Putrajaya Malaysia prior to the 7th ASEAN Environment Ministerial Meeting. The Meeting discussed matters relating to:

- *Progress of the Regional Haze Action Plan (RHAP); Preventive Measures, Regional Monitoring Mechanisms and Fire Fighting Capabilities*
- *Progress reports by the relevant Working Groups on Sub-Regional Fire-Fighting Arrangements (SRFA) for Sumatra and Borneo*
- *Progress in Operationalising and Implementing the RHAP by RETA*
- *International assistance and collaboration to mitigate land and forest fires*

Haze Technical Task Force (HTTF) Working Groups on Sub-Regional Fire-Fighting Arrangements (SRFAs) for Borneo and Sumatra

The Working Groups for Sub-Regional Fire Fighting Arrangements for Borneo and Sumatra met regularly in 1999. Brunei Darussalam, Indonesia, Malaysia and Singapore attended the meetings. A second Joint Meeting of the Working Groups was held



kerap dalam tahun 1999. Brunei Darussalam, Indonesia, Malaysia dan Singapura hadir di Mesyuarat-mesyuarat tersebut. Mesyuarat Bersama Kumpulan Kerja yang kedua telah diadakan pada 25-26 Februari 1999 di Singapura. Antara isu-isu yang dibincangkan adalah langkah-langkah pencegahan bagi menangani jerebu dan kaedah pembakaran sifar bagi aktiviti perladangan.

Kumpulan Kerja SRFA bagi Borneo bermesyuarat untuk kali ke 5 pada 28 Jun 1999 di Brunei Darussalam dan Mesyuarat ke 6 pada 23 September 1999 di Kuching, Sarawak. Kumpulan ini membincangkan secara terperinci mengenai pelaksanaan polisi pembakaran sifar bagi kawasan yang mudah terbakar di Kalimantan. Satu perjanjian telah dicapai untuk memulakan kempen kesedaran orang ramai membenters pembakaran terbuka dan mempromosikan pembakaran sifar.

Malaysia telah menyumbangkan sejumlah RM50,000.00 untuk melaksanakan aktiviti ini di bawah SRFAs Sumatra. Satu Program Latihan terhadap Teknik Pembakaran Sifar ke Arah Amalan Perladangan yang Baik telah diadakan pada 5-8 April 1999 di Shah Alam, Selangor untuk pemadam kebakaran dan pelatih Indonesia dalam melawan kebakaran dan di Bintulu, Sarawak bagi pemunya-pemunya ladang di Indonesia.

Kumpulan Kerja SRFA bagi Sumatera telah bermesyuarat kali ke 9 pada 27 Mei 1999 di Singapura dan Mesyuarat ke 10 pada 23 September 1999 di Kuching, Sarawak. Kumpulan ini membincangkan mengenai langkah-langkah kawalan dan pemantauan kebakaran di Sumatra. Penekanan utama yang dibincangkan adalah ke atas pelaksanaan langkah-langkah tersebut.

Mesyuarat Menteri-Menteri Alam Sekitar ASEAN Mengenai Jerebu (AMMH)

Mesyuarat ke 7 Menteri-Menteri Alam Sekitar ASEAN Mengenai Jerebu (AMMH) telah diadakan pada 6 Julai 1999 di Putrajaya, Malaysia bagi mengkaji semula kemajuan, strategi dan mekanisma bagi pelaksanaan

on 25-26 February 1999 in Singapore. Among the issues discussed were preventive and mitigating measures for haze and zero burning methods for agricultural activities.

The Working Group on SRFA for Borneo met for the fifth time on 28 June 1999 in Brunei Darussalam and held its 6th Meeting on 23 September 1999 in Kuching, Sarawak. The Working Group discussed extensively on the operationalization of the zero burning policy particularly for fire prone areas in Kalimantan. An agreement was reached to initiate regular public awareness campaigns against open burning and to promote zero burning.

Malaysia made a contribution of RM50,000.00 to implement activities under the SRFAs for Sumatra. A Training Seminar on Zero Burning Technique for Good Agricultural Practices was held on 5-8 April 1999 at Shah Alam, Selangor for Indonesian trainers and firefighters, and in Bintulu, Sarawak for Indonesian Plantation Owners.

The Working Group on SRFA for Sumatra at its 9th Meeting on 27 May 1999 in Singapore and its 10th Meeting on 23 September 1999 in Kuching, Sarawak also deliberated extensively on the preventive and mitigating measures for fires in Sumatra. The main emphasis of the discussion was on the implementation of these measures.

ASEAN Environment Ministerial Meeting on Haze (AMMH)

The 7th ASEAN Environment Ministerial Meeting on Haze was held on 6 July 1999 in Putrajaya, Malaysia to review the progress, strategies and mechanisms for the implementation of the ASEAN Regional Haze Action Plan (RHAP).

The Ministers were informed of the implementation of the zero burning policy, the formulation of new regulations and stricter enforcement action by member countries to control open burning.



Pelan Tindakan Serantau mengenai Jerebu (RHAP).

Menteri-menteri dimaklumkan mengenai polisi pembakaran sifar, pembentukan perintah baru dan tindakan penguatkuasaan yang tegas oleh ahli negara-negara bagi mengawal pembakaran terbuka.

Menteri-menteri juga bersetuju dengan Pelan Tindakan Segara (IAP) bagi Riau dan lain-lain daerah di kawasan mudah berjerebu di Sumatra dan Kalimantan. Pelan tindakan ini telah dilaksanakan segera bagi mencegah kebakaran semasa musim kering pada tahun 1999. Menteri-menteri juga telah mengesahkan Pelan Pelaksanaan terkini bagi Pelan Tindakan Serantau mengenai Jerebu (RHAP) dan mengesyorkan Pelan hendaklah sentiasa dikaji di mana berkemungkinan adanya perubahan. Mesyuarat juga bersetuju melancarkan kempen media bagi mencegah pembakaran terbuka terutama semasa musim kering.

Menteri-menteri juga mengambil maklum mengenai penubuhan penyelaras bantuan dalam Sekretariat ASEAN dan mengucapkan penghargaan kepada agensi antarabangsa dan negara penderma bagi memberi bantuan dan kerjasama dalam pelaksanaan RHAP serta dalam hal jerebu merentas sempadan.

Mesyuarat Pegawai-Pegawai Kanan ASEAN mengenai Alam Sekitar (ASOEN)

Mesyuarat ke 10 Pegawai-Pegawai Kanan ASEAN mengenai Alam Sekitar (ASOEN) telah diadakan pada 15-16 September 1999 di Bangkok, Thailand. ASOEN membincangkan dan mengambil kata sepakat mengenai TOR yang telah dikaji semula mengenai kemajuan program dan aktiviti Kumpulan Kerja termasuk Pasukan Petugas Teknikal ASOEN mengenai jerebu (HTTF), sebagaimana yang telah digariskan dalam Pelan Tindakan Strategik mengenai Alam Sekitar di bawah Pelan Tindakan Hanoi.

The Ministers agreed that the Immediate Action Plan (IAP) for Riau and other provinces in the haze-prone areas in Sumatra and Kalimantan be implemented immediately to prevent any fire from occurring during the dry spells in 1999. The Ministers also endorsed the updated Implementation Plan for the RHAP and recommended that the Plan be revised regularly in view of possible changes in field conditions. In addition, the Meeting agreed to launch a media campaign to prevent open burning especially during the dry season.

The Ministers also took note of the establishment of the coordination support within the ASEAN Secretariat and expressed their sincere appreciations to international agencies and donor countries for providing support and collaboration in the implementation of RHAP and in addressing transboundary haze pollution.

ASEAN Senior Officials on the Environment (ASOEN)

The 10th ASEAN Senior Officials Meeting on the Environment (ASOEN) was held on 15-16 September 1999 in Bangkok, Thailand. ASOEN adopted the revised Terms of Reference (TOR) of all the restructured Working Groups and took note of the progress in the programmes and activities of these Working Groups, as outlined in the Strategic Plan of Action on the Environment under the Hanoi Action Plan.



Forum Alam Sekitar ASEAN

Forum Alam Sekitar ASEAN yang Pertama, di bawah naungan ASOEN, telah diadakan di Hanoi, Vietnam pada 20-24 September 1999. Dua wakil dari JAS telah menghadiri Forum ini. Forum ini telah memberikan satu platform bagi para peserta berbincang dan bertukar pandangan mengenai:

- Alam Sekitar dan pembangunan mapan
- Pengurusan Alam Sekitar
- Standard Alam Sekitar
- Pampasan dan Penilaian Kerosakan Alam Sekitar

Brunei-Indonesia-Malaysia-Filipina dan Kawasan Pertumbuhan ASEAN Timur (BIMP-EAGA)

Mesyuarat BIMP-EAGA ke 8 telah diadakan di Brunei Darussalam pada 24-25 Februari 1999. Persetujuan telah dicapai untuk menggabungkan Kumpulan Kerja Perlindungan Alam Sekitar dengan Kumpulan Kerja Perhutanan. Susulan daripada ketetapan tersebut, satu mesyuarat penggabungan telah diadakan di Davao, Filipina pada 17-19 November 1999 bagi membincangkan melengkapkan TOR yang baru dan seterusnya berbincang dan mengenalpasti sektor-sektor kerjasama yang baru bagi kedua-dua sektor.

Jawatankuasa Kecil ASEAN-EC mengenai Alam Sekitar

Mesyuarat Pertama Jawatankuasa Kecil ASEAN-EC mengenai Alam Sekitar telah diadakan pada 23-24 November 1999 di Brussels, Belgium di mana JAS telah menyertainya. Mesyuarat telah bertukar-tukar pandangan dan maklumat mengenai aktiviti serantau, hal ehwal antarabangsa dan bidang keutamaan untuk kerjasama.

KERJASAMA ANTARABANGSA

Mesyuarat ke 5 Persidangan Parti Konvensyen Basel Terhadap Kawalan Pergerakan dan Pelupusan Buangan Berbahaya Merentasi Sempadan (COP5)

COP5 telah diadakan pada 6-10 Disember 1999 di Basel, Switzerland dan ia

ASEAN Environmental Forum

The First ASEAN Environmental Forum, under the auspices of ASOEN was successfully held in Hanoi, Vietnam, on 20-24 September 1999. Two representatives from DOE attended the Forum which provided a platform for participants to discuss and exchange views pertaining to:

- *Environment & Sustainable Development*
- *Environmental Management*
- *Environmental Standards*
- *Environmental Compensation and Damage Assessment*

Brunei-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA)

The 8th BIMP-EAGA Meeting was held in Brunei Darussalam on 24-25 February 1999. The Meeting agreed that the Working Group on Environmental Protection be merged with the Working Group on Forestry. Pursuant to the decision, a Meeting of the new Working Group took place in Davao, Philippines on 17-19 November 1999 to finalize the new TOR and discussed and identified new areas of cooperation in the two sectors.

ASEAN-EC Sub Committee on Environment

The 1st Meeting of the ASEAN-EC Sub Committee on Environment was held on 23-24 November 1999 in Brussels, Belgium in which DOE participated. The Meeting exchanged views and information on regional activities, international matters and priority areas for collaboration.

INTERNATIONAL COOPERATION

Fifth Meeting of the Conference of Parties to the Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal (COP5)

COP5 was held in Basel, Switzerland on 6-10 December 1999 in conjunction with the 10th anniversary since the adoption of the Convention. Madam Hajah Rosnani Ibarahim, the Director General of Environment Malaysia as President of COP4 officially opened the



memperingati perayaan ke sepuluh penerimaan Konvensyen. Puan Hajah Rosnani Ibarahim, Ketua Pengarah Alam Sekitar sebagai Presiden COP4 telah membuka dengan resminya mesyuarat tersebut dan seterusnya dikendalikan oleh Biro COP5 yang baru dilantik dan dipengerusikan oleh Presidennya, En. Philippe Roch dari Switzerland. Mesyuarat telah dihadiri oleh delegasi dari negara-negara parti kepada Konvensyen Basel, pemerhati dari bukan-parti, Organisasi Kerajaan Antarabangsa, Organisasi Bukan Kerajaan dan Badan-badan Khusus Bangsa-Bangsa Bersatu. COP5 telah membincangkan tiga perkara utama:

- Penguraian visi sebagai panduan kerja kepada Konvensyen bagi dekad yang akan datang
- Pengenalpastian sumber-sumber kewangan yang perlu untuk mencapai matlamat ini
- Penerimaan protokol bagi liabiliti dan pampasan bagi kerosakan hasil pergerakan dan pelupusan buangan berbahaya merentasi sempadan.

Persidangan parti-parti sebulat suara menerima Deklarasi Basel mengenai Pengurusan Bijak Alam yang memperincikan strategi dan agenda bagi dekad yang akan datang. Sembilan aktiviti-aktiviti utama telah dipilih untuk mencapai pengurusan bijak alam termasuk promosi dan penggunaan yang aktif teknologi bersih yang bertujuan untuk mencegah dan meminimalkan buangan berbahaya dan lain-lain bahan buangan yang tertakluk kepada Konvensyen Basel; dan pencegahan dan pemantauan pergerakan buangan haram.

Dalam penyusunan kewangan, COP5 meluluskan anggaran belanjawan bagi Tabung Amanah kepada Konvensyen Basel sebanyak USD 4,201,854 bagi tahun 2001 dan 2002. Ia juga membenarkan penggunaan simpanan dan baki Tabung Amanah untuk tujuan melaksanakan aktiviti-aktiviti utama yang berkaitan dengan Deklarasi Basel.

Salah satu keputusan penting yang dibuat oleh COP5 ialah penerimaan Protokol Liabiliti dan

Meeting. The Meeting was conducted by the newly elected President of COP5, Mr. Philippe Roch of Switzerland and was attended by delegates from Parties to the Basel Convention, Non-Party Observers, Inter-Governmental Organizations, Non-Governmental Organizations and Specialized Bodies of the United Nations. COP5 was focused on three primary areas:

- *Elaboration of a vision to guide the work of the Convention over the next decade.*
- *Identification of the financial resources necessary to achieve these goals.*
- *Adoption of a protocol on liability and compensation for damage resulting from transboundary movements of hazardous wastes and their disposal.*

The Conference of Parties adopted by acclamation the Basel Declaration on Environmentally Sound Management which detailed out the strategies and agenda for the next decade. Nine main activities were identified to achieve the objectives of environmentally sound management and these included active promotion and use of cleaner technologies to prevent and minimise the generation of hazardous and other wastes which could be subjected to the Basel Convention, and the prevention and monitoring of illegal waste traffic.

On financial arrangements, COP5 approved the budget for the Basel Convention Trust Fund for the amount of US 4,201,854 each for year 2001 and 2002. It also authorized the utilization of reserve and balance of the Trust Fund for the purpose of implementing prioritized activities relating to the Basel Convention.

One important decision of COP5 was the adoption of the Protocol on Liability and Compensation resulting from Transboundary Movements of Hazardous Wastes and their Disposal. The Protocol referred to the need to set out appropriate rules and procedures for liability and compensation in order to ensure that adequate and prompt compensation is



Pampasan hasil dari Pergerakan dan Pelupusan Buangan Berbahaya Merentasi Sempadan. Protokol ini dirujuk bagi keperluan untuk menetapkan peraturan dan prosedur yang sesuai untuk liabiliti dan pampasan bagi memastikan pampasan yang cepat dan mencukupi tersedia untuk kerosakan yang timbul daripada pergerakan dan pelupusan buangan berbahaya dan lain-lain buangan merentasi sempadan. Mesyuarat juga mencadangkan supaya had kewangan bagi liabiliti di bawah Artikel 4 disemak dengan lebih lanjut untuk memastikan jumlah yang ditetapkan dengan mengambilkira situasi negara-negara sedang membangun. Walaupun demikian, jumlah tersebut masih tertakluk kepada semakan Parti-Parti Kontrak secara tetap yang mengambilkira potensi risiko ke atas alam sekitar.

Jawatankuasa Pengurusan bagi Maklumbalas dan Persediaan Tumpahan Minyak (OSPAR)

Mesyuarat ke 4 Jawatankuasa Pengurusan bagi Maklumbalas dan Persediaan Tumpahan Minyak (OSPAR) telah diadakan di Kuala Lumpur pada 15-16 Mac 1999. Delegasi terdiri daripada Brunei Darussalam, Malaysia, Filipina, Singapura, Thailand dan Jepun. Setiap negara telah menyampaikan laporan mengenai status Projek OSPAR dan Sistem Jaringan Maklumat negara masing-masing. Mesyuarat juga membincangkan perkara berkaitan Pelan Kontigensi Tumpahan Minyak yang telah diwujudkan bagi memberikan bantuan yang perlu semasa berlakunya kes-tumpahan minyak yang besar yang memerlukan tindakan lebih dari satu negara.

Protokol Montreal Bagi Melindungi Lapisan Ozon

Unit Pelindungan Ozon (OPU) terus memainkan peranannya sebagai pusat tumpuan kebangsaan dan pusat serenti dalam menyelaraskan, memantau dan melaksanakan aktiviti-aktiviti penghapusan bahan pemusnah ozon. Sejumlah 4126.66 ODP tan telah dapat dihapuskan dari 100 projek ODS. (Jadual 7.0). Agensi pelaksana bagi projek penghapusan

available for damage resulting from transboundary movement and disposal of hazardous and other wastes. The Meeting also recommended that the financial limits for liability under Article 4 be further examined to take into consideration the situation in developing countries and that the amount be subject to review on a regular basis, taking into account, the potential risks posed to the environment.

Oil Spill Preparedness and Response (OSPAR) Management Committee

The 4th Oil Spill Preparedness and Response (OSPAR) Management Committee Meeting was held in Kuala Lumpur on 15-16 March 1999. Delegates from Brunei Darussalam, Malaysia, Philippines, Singapore, Thailand and Japan attended. Each member country presented its country report on the status of the OSPAR Project and the Information Network System available in each country. The Meeting also discussed matters relating to the Oil Spill Contingency Plan which had been drawn up to provide for mutual assistance in the event of a major oil spill incident exceeding the response capability of each member country.

Montreal Protocol For Protection of The Ozone Layer

As a party to the international agreement on the Montreal Protocol for the Protection of the Ozone Layer, the Ozone Protection Unit (OPU) of DOE serves as the national focal point and one-stop agency for coordinating, monitoring and implementing all Ozone Depleting Substances (ODS) phase-out activities. By the end of 1999 an equivalent of 4126.66 Ozone Depleting Potential (ODP) tonnes of ODS were phased-out with the completion of 100 ODS phase-out projects. (Table 7.0) The implementing agencies for the ODS phase-out projects also conducted mission visits to Malaysia to assess the effectiveness of the phase-out implementation. (Table 7.1)

To promote awareness on ODS among end users, seminars, talks, workshops and road



ODS juga mengadakan misi lawatan ke Malaysia bagi memastikan keberkesanan pelaksanaan projek tersebut. (Jadual 7.1).

Bagi mempromosi kempen kesedaran ODS, seminar, bengkel dan 'road shows' telah diadakan di kalangan pengguna sepanjang tahun (Jadual 7.2).

Beberapa penerbitan mengenai ODS telah diterbitkan untuk sebaran bagi tujuan meningkatkan kesedaran (Jadual 7.3).

Dua peraturan baru telah diwartakan bagi tujuan pengurusan halon dan pendingin yang lebih efektif. Kedua-dua peraturan ini berkuatkuasa pada 1 Januari 2000. (Jadual 7.4).

PROGRAM-PROGRAM ALAM SEKITAR PERTUBUHAN BANGSA-BANGSA BERSATU (UNEP)

Pada tahun 1999, Jabatan secara aktif terlibat dalam pelbagai program dan menyertai berapa-berapa aktiviti yang diadakan oleh UNEP (Jadual 7.5)

Projek "GEF/UNDP/IMO on Building Partnership for Environmental Protection and Management of East Asian Seas"

Projek ini adalah sambungan bagi fasa perintis GEF yang telah dijalankan di Teluk Batangas, Filipina dan Xiamen, China yang meliputi tempoh 5 tahun (1994-1999).

Kerja-kerja penyediaan bagi Pelan Kedua telah dimulakan pada tahun 1999. Kawasan Pelabuhan Kelang di Selangor telah dipilih untuk fasa kedua ini berasaskan kepada isu-isu yang dihadapi dari segi kepupusan habitat marin akibat pembangunan pesat pelabuhan dan industri serta pembuangan sampah-sarap. Program Kebangsaan ini akan meliputi aspek-aspek penyusunan institusi ICM; penilaian risiko alam sekitar; pemantauan dan penilaian alam sekitar; pelaksanaan pelan strategik alam sekitar; pengezonan kegunaan tanah dan air; pelan tindakan kawasan-kawasan tertentu; dan mekanisme pembiayaan yang mampan. Projek

shows were conducted throughout the year (Table 7.2).

A series of ODS related publications were produced for distribution to further enhance awareness activities (Table 7.3).

Two new regulations were gazetted for the effective management of Halons and Refrigerants. These regulations came into force on 1 January 2000 (Table 7.4).

UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP)

In 1999, the Department was actively involved in various environmental programmes and participated in several activities organised by UNEP (Table 7.5).

GEF/UNDP/IMO Project on Building Partnership for Environmental Protection and Management of East Asian Seas

The GEF/UNDP/IMO Project on Building Partnership for Environmental Protection and Management of East Asia Seas is an extension of the initial Pilot Phase which involved Batangas Bay in the Philippines and Xiamen in China for a five year period 1994-1999.

Preparatory work on the Second Plan started in 1999. Port Kelang in Selangor was been chosen as a natural demonstration site for the second phase based on the issues of loss of marine habitats due to rapid port/industrial development and waste disposal. The National Programme will cover aspects on ICM institutional arrangements; environmental risk assessment; environmental monitoring and assessment; implementation of strategic environmental management plan; integrated land and water use zoning; area specific action plan; and sustainable financing mechanism. The project will also include training of local government officials and establishing regional network of local governments.

The project is anticipated to yield positive results judging from the achievements of the



**Jadual 7.0 Malaysia: Projek dan Aktiviti Yang Diluluskan Oleh Tabung Multilateral
(Sehingga 31 Disember 1999)**

**Table 7.0: Malaysia: Project and Activities Approved Under the Montreal Protocol Multilateral Fund
(as of 31 December 1999)**

SEKTOR SECTORS	BIL. PROJEK/AKTIVITI YANG DILULUSKAN NO. OF PROJECTS APPROVED	KOS (USD) COST (USD)
PENDINGIN REFRIGERATION	15	11,585,691
PELARUT PENCUCI SOLVENT	11	2,098,729
BUSAR FOAM	62	12,429,118
AEROSOL AEROSOL	7	2,603,063
HALON HALON	2	922,932
AKTIVITI AM SEVERAL ACTIVITIES	27	2,076,728
PERTANIAN (METHIL BROMIDA) AGRICULTURE METHYL BROMIDE	2	235,000
JUMLAH TOTAL	126 126	31,951,261 31,742,361
TAHUN : 1999 YEAR : 1999	BIL. PROJEK / AKTIVITI YANG DILULUSKAN NO. OF PROJECTS APPROVED	KOS (USD) COSTS (USD)
PENDINGIN REFRIGERATION	2	400,649
PELARUT PENCUCI SOLVENT	1	30,000
BUSAR (FOAM) FOAM	9	1,138,084
AEROSAL AEROSAL	-	-
HALON HALON	-	-
AKTIVITI AM SEVERAL ACTIVITIES	4	165,000
PERTANIAN (METHIL BROMIDA) AGRICULTURE METHYL BROMIDE	1	230,000
JUMLAH / SUB-TOTAL	17	1,963,733
JUMLAH SUMBANGAN DIPERUNTUKKAN AMOUNT OF MONEY RECEIVED	: USD 31.95 JUTA : USD 31.95 MILLION	
JUMLAH YANG TELAH DITERIMA AMOUNT DISBURSED	: USD 29.05 JUTA : USD 29.05 MILLION	
BIL. PROJEK DAN AKTIVITI SELESAI NO. OF PROJECTS AND ACTIVITIES COMPLETED	: 100 : 100	
JUMLAH ODS YANG TELAH DIHAPUSKAN AMOUNT OF ODS PHASED OUT	: 4216.66 ODP TON : 4216.66 ODP TON	
BAKI ODS YANG BELUM DIHAPUSKAN BALANCE OF ODS TO BE PHASED OUT	: 786 ODP TON : 786 ODP TON	



**Jadual 7.1 Jabatan Alam Sekitar: Misi Lawatan Agensi
Pelaksana ke Malaysia**
*Table 7.1 Department of Environment: Implementation Agencies'
Missions to Malaysia*

Tarikh / Date	Nama Agensi / Agency
15 - 17 Februari 1999 <i>15 - 17 February 1999</i>	UNIDO <i>UNIDO</i>
18 - 24 Februari 1999 <i>18 - 24 February 1999</i>	Bank Dunia <i>World Bank</i>
8 - 20 Mac 1999 <i>8 - 20 Mac 1999</i>	UNDP <i>UNDP</i>
29 Mac - 2 April 1999 <i>29 Mac - 2 April 1999</i>	UNDP <i>UNDP</i>
26 - 28 April 1999 <i>26 - 28 April 1999</i>	Bank Dunia <i>World Bank</i>
26 Julai - 7 Ogos 1999 <i>26 July - 7 August 1999</i>	Swedish International Development Agency (SIDA) <i>Swedish International Development Agency (SIDA)</i>
19 - 20 Ogos 1999 <i>19 - 20 August 1999</i>	Multilateral Fund Evaluation Team (MLF) <i>Multilateral Fund Evaluation Team (MLF)</i>
19 - 27 Ogos 1999 <i>19 - 27 August 1999</i>	UNDP <i>UNDP</i>
25 - 30 Ogos 1999 <i>25 - 30 August 1999</i>	Bank Dunia <i>World Bank</i>
20 - 26 November 1999 <i>20 - 26 November 1999</i>	UNDP <i>UNDP</i>
21 - 17 Disember 1999 <i>21 - 17 December 1999</i>	UNIDO <i>UNIDO</i>



Jadual 7.2 Jabatan Alam Sekitar: Aktiviti Kesedaran Mengenai Penghapusan Bahan Pemusnah Ozon, 1999

Table 7.2 Department of Environment: ODS Phase-out Awareness Activities, 1999

Tarikh / Date	Aktiviti / Activities	Tempat / Venue
9 Mac 1999 9 March 1999	Seminar Mengenai Bank Halon Malaysia dan Bahan-bahan Alternatif <i>Seminar On Halon Bank and Alternatives</i>	Kuala Kubu Baru
26 - 30 April 1999 26 - 30 April 1999	Lawatan Pemerhatian keupayaan alat kitar semula refrigeran untuk chiller bangunan <i>Visit to observe performances of recycling equipment for chiller</i>	Canada
28 April 1999 28 April 1999	Sidang akhbar oleh Y.B Menteri Sains, Teknologi dan Alam Sekitar, mengenai Peraturan-Peraturan baru Pengurusan Halon dan Pengurusan Refrigeran. <i>Press Conference by Y.B Minister of Science, Technology and the Environment on Halon Management And Refrigerant Management Regulations</i>	Kuala Lumpur
1 Mei 1999 1 May 1999	Perbualan terus di RTM mengenai isu-isu CFC dan kuiz ozon <i>Talk shows on RTM on CFC issues and Ozone quiz</i>	Kuala Lumpur
17 Mei 1999 17 May 1999	Taklimat di Persekutuan Pengilang-Pengilang Malaysia (FMM) mengenai isu-isu CFC <i>Talk on CFC issues at Federation of Malaysian Manufacturers (FMM)</i>	Kuala Lumpur
18 Mei 1999 18 May 1999	Taklimat kepada pegawai-pegawai di Kem. Pertahanan mengenai Peraturan Pengurusan Halon <i>Talk on Halon Regulations for Government Officers at Ministry of Defense</i>	Kuala Lumpur
26 Jun 1999 26 June 1999	Seminar Mengenai Bank Halon Malaysia dan bahan-bahan alternatif <i>Seminar On Halon Bank and Alternatives</i>	Kuantan
5 Ogos 1999 5 August 1999	Bengkel mengenai penghapusan CFC di pendingin udara kenderaan. <i>Workshop on CFC Phase-out in Mobile Air Conditioning</i>	Kuala Lumpur
27 Ogos 1999 27 August 1999	Bengkel mengenai 'Rapid Assessment of ODS Phase Out Programme' <i>Workshop on Rapid Assessment of ODS Phase Out Programme</i>	Kuala Lumpur
29 - 30 Sep. 1999 29 - 30 Sept. 1999	Seminar mengenai Peraturan-Peraturan baru BPO <i>Seminar on New ODS regulations</i>	Kuala Lumpur
26 - 28 Oktober 1999 26 - 28 October 1999	Latihan amali kepada 45 pelatih mengenai pengendalian chiller bangunan <i>Practical training for 45 trainees on handling of building chiller</i>	Kelana Jaya
5 Disember 1999 5 December 1999	Taklimat mengenai Pengurusan Refrigeran kepada pemilik-pemilik bengkel pendingin udara kenderaan <i>Road Show on Refrigerant Management Regulations in Mobile Air Conditioning</i>	Ipoh
19 Disember 1999 19 December 1999	Taklimat mengenai Pengurusan Refrigeran kepada pemilik-pemilik bengkel pendingin udara kenderaan <i>Road Show on Refrigerant Regulations in Mobile Air Conditioning</i>	Johor Bahru



Jadual 7.3 Jabatan Alam Sekitar: Terbitan 1999
Table 7.3 Ozone Protection Unit: Publications 1999

Tajuk / Title	Tarikh Penerbitan / Date of Publication
'Significant New Alternatives List for Ozone Depleting Substances, Second Edition' <i>Significant New Alternatives List for Ozone Depleting Substances, Second Edition</i>	Februari 1999 <i>February 1999</i>
'Mobile Air-conditioner vs. the Ozone Layer, Second Edition' <i>Mobile Air-conditioner vs. the Ozone Layer, Second Edition</i>	Mac 1999 <i>March 1999</i>
'Penyaman Udara Kenderaan vs. Lapisan Ozon, Edisi Kedua' <i>Penyaman Udara Kenderaan vs. Lapisan Ozon, Edisi Kedua</i>	Mac 1999 <i>March 1999</i>
'Halon Alternatives Directory' <i>Halon Alternatives Directory</i>	Ogos 1999 <i>August 1999</i>
'MASHRAE CFC Recovery and Reclamation Project' <i>MASHRAE CFC Recovery and Reclamation Project</i>	Oktober 1999 <i>October 1999</i>
'Malaysia's Success Story in the implementation of Montreal Protocol on substances that depleted the ozone layer' <i>Malaysia's Success Story in the implementation of Montreal Protocol on substances that deplete the ozone layer</i>	November 1999 <i>November 1999</i>
Kalendar ODS 2000 <i>Calendar ODS 2000</i>	Disember 1999 <i>December 1999</i>

Jadual 7.4 Jabatan Alam Sekitar: Peraturan-Peraturan Baru Yang Diwartakan, 1999
Table 7.4 Department of Environment: Regulations Gazetted in 1999

Peraturan / Regulations	Tarikh / Date
Peraturan-Peraturan Kualiti Alam Sekeliling (Pengurusan Refrigeran), 1999 <i>Environmental Quality (Refrigerant Management) Regulations 1999</i>	28 Oktober 1999 <i>28 October 1999</i>
Peraturan-Peraturan Kualiti Alam Sekeliling (Pengurusan Halon), 1999 <i>Environmental Quality (Halon Management) Regulations 1999</i>	28 Oktober 1999 <i>28 October 1999</i>



Jadual 7.5 Jabatan Alam Sekitar: Aktiviti UNEP, 1999
Table 7.5 Department of Environment: UNEP Activities, 1999

Bil. / No.	Aktiviti / Activities	Tarikh / Date	Tempat / Venue
1.	'2 nd Session for an International Legally Binding Instrument for Implementing Action on Certain POPs' <i>2nd Session for an International Legally Binding Instrument for Implementing Action on Certain POPs.</i>	25-29 Januari <i>25-29 January</i>	Nairobi, Kenya <i>Nairobi, Kenya</i>
2.	'8 th Session of the Ad Hoc Working Group of Legal and Technical Experts on Basel Convention' <i>8th Session of the Ad Hoc Working Group of Legal and Technical Experts on Basel Convention.</i>	11-15 Januari <i>11-15 January</i>	Geneva, Switzerland <i>Geneva, Switzerland</i>
3.	'Regional Workshop on Management of POPs' <i>Regional Workshop on Management of POPs.</i>	16-19 Januari <i>16-19 January</i>	Hanoi, Vietnam <i>Hanoi, Vietnam</i>
4.	'GMS Workshop on State of the Environment Database and Reporting' <i>GMS Workshop on State of the Environment Database and Reporting.</i>	31 Mac-9 April <i>31 Marc-9 April</i>	Pathumtani, Thailand <i>Pathumtani, Thailand</i>
5.	'5 th Steering Committee Meeting on Training & Research on Environmental Management (TREM)' <i>5th Steering Committee Meeting on Training & Research on Environmental Management (TREM)</i>	7 Jun <i>7 June</i>	Bangkok, Thailand <i>Bangkok, Thailand</i>
6.	'19 th Open-Ended Working Group of Parties to Montreal Protocol' <i>19th Open-Ended Working Group of Parties to Montreal Protocol</i>	15-18 Jun <i>15-18 June</i>	Geneva, Switzerland <i>Geneva, Switzerland</i>
7.	'2 nd Meeting POPs Criteria Expert (CEG)' <i>2nd Meeting POPs Criteria Expert Group (CEG).</i>	14-18 Jun <i>14-18 June</i>	Vienna, Austria <i>Vienna, Austria</i>
8.	'Workshop on Enforcement and Compliance with Multilateral Environmental Agreements (MEAs)' <i>Workshop on Enforcement and Compliance with Multilateral Environmental Agreements (MEAs).</i>	12-14 Julai <i>12-14 July</i>	Geneva, Switzerland <i>Geneva, Switzerland</i>
9.	'Inception Workshop: ASEAN State of Environment SOE Report 2000 & SOE database harmonization for ASEAN' <i>Inception Workshop: ASEAN State of Environment SOE Report 2000 & SOE Database Harmonization for ASEAN.</i>	21-22 Julai <i>21-22 July</i>	Bangkok, Thailand <i>Bangkok, Thailand</i>
10.	'Brainstorming Workshop on the Ministerial Conference on Environment and Development' <i>Brainstorming Workshop on the Ministerial Conference on Environment and Development.</i>	9-10 Ogos <i>9-10 August</i>	Bangkok, Thailand <i>Bangkok, Thailand</i>
11.	'Asia-Pacific Blue Flag Feasibility Evaluation Workshop' <i>Asia-Pacific Blue Flag Feasibility Evaluation Workshop.</i>	24-25 Oktober <i>24-25 October</i>	Bangkok, Thailand <i>Bangkok, Thailand</i>
12.	'NETTLAP Regional Conference: Progress in Environmental Education, Training and Research in the Asia-Pacific' <i>NETTLAP Regional Conference: Progress in Environmental Education, Training and Research in the Asia-Pacific.</i>	29 Sep.-2 Oktober <i>29 Sept.-2 October</i>	Phuket, Thailand <i>Phuket, Thailand</i>
13.	'Training Research on Environment Management Joint Review Workshop' <i>Training Research on Environment Management Joint Review Workshop</i>	27-29 Septmber <i>27-29 September</i>	Phuket, Thailand <i>Phuket, Thailand</i>
14.	'1999 Main ODS Officers Networking Meeting and EPSON Regional Ozone Symposium' <i>1999 Main ODS Officers Network Meeting and EPSON Regional Ozone Symposium.</i>	11-15 Oktober <i>11-15 October</i>	Sydney, Australia <i>Sydney, Australia</i>
15.	'POPs and Heavy Metals Workshops' <i>POPs and Heavy Metals Workshops.</i>	16-19 November <i>16-19 November</i>	Geneva, Switzerland <i>Geneva, Switzerland</i>
16.	'4 th Global Training Programme in Environmental Law and Policy' <i>4th Global Training Programme in Environmental Law and Policy.</i>	15 Nov.-3 Disember <i>15 Nov.-3 December</i>	Nairobi, Kenya <i>Nairobi, Kenya</i>



ini turut merangkumi aspek latihan kepada kakitangan pihak berkuasa tempatan dan mengujudkan rangkaian serantau di kalangan pihak berkenaan.

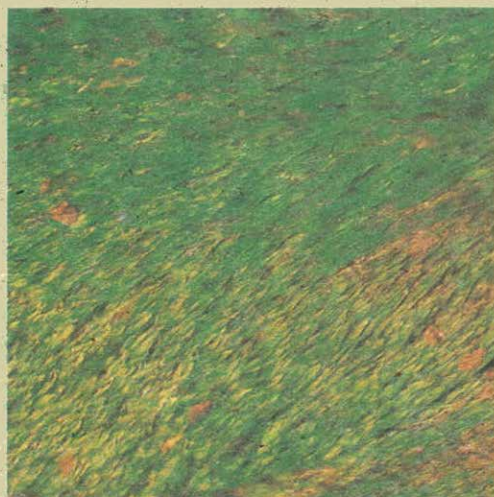
Projek ini dijangka akan memberi hasil yang positif kepada tapak yang terpilih berdasarkan kepada pencapaian dan kejayaan dalam fasa perintis di 2 tapak terdahulu iaitu: Teluk Batangas dan Xiamen.

Pelaksanaan projek ini adalah dipantau oleh Jawatankuasa Pemandu Program (PSC) yang mengandungi 10 buah negara anggota di rantau ini termasuk Malaysia. Mesyuarat PSC ke 6 yang telah diadakan di Manila pada 25 Mac 1999 membincangkan cadangan bagi fasa susulan ini dan tindakan yang perlu diambil oleh pejabat IMO di Manila dan negara yang menyertainya.

pilot phase at the 2 earlier sites: Batangas Bay and Xiamen.

The entire project implementation is being monitored by a Programme Steering Committee (PSC) consisting of 10 member countries in the region including Malaysia. The 6th PSC meeting was held in Manila on 25 March 1999 which discussed the proposal for the follow-up phase and the action to be taken up by the IMO office in Manila and the respective participating countries.

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Chapter 8

TEKNOLOGI MAKLUMAT

Program Teknologi Maklumat telah diwujudkan pada tahun 1989, dengan objektif seperti:

- Mempertingkatkan produktiviti jabatan melalui pengurusan Sistem Maklumat Alam Sekitar yang lebih efektif dan berkesan.
- Meningkatkan pengetahuan IT kepada kakitangan Alam Sekitar.

Pada tahun 1999 rangkaian komputer telah memperkenalkan kepada Pejabat Negeri dan Pejabat Cawangan melalui perkhidmatan COINS (Cooperate Information Superhighways) yang dikendalikan oleh Telekom Malaysia Berhad. Perkhidmatan ini termasuk:

- Virtual Private Network atau dikenali sebagai WAN atau Intranet yang menghubungkan antara Ibu Pejabat dan Pejabat Negeri dan Cawangan (Rajah 8.0)
- Pencapaian Internet melalui perkhidmatan TmNet
- VOIP atau dikenali sebagai Voice Over IP Frame yang membolehkan panggilan bersuara dan fax dalam organisasi

E-mel

Pengguna emel di kalangan kakitangan JAS agak terhad sebelum perkhidmatan COINS dilaksanakan. Bagi tahun 1999 bilangan pengguna yang didaftar adalah sebanyak 349 akaun satu peningkatan yang signifikan dan ia dijangka bertambah kepada 388 pada tahun 2000 (Rajah 8.1).

Sistem yang berdasarkan Web telah dicadangkan. Sistem ini akan menyelesaikan banyak masalah yang kini dihadapi oleh anggota JAS. Sistem berdasarkan Web ini akan membolehkan pengguna-pengguna yang diizinkan mencapai sistem Jabatan Alam Sekitar dari mana-mana tempat di seluruh dunia dengan menggunakan browser Web melalui komputer berinternet.

Oleh kerana projek ini agak besar, Bahagian Teknologi Maklumat akan melaksanakan kerja pembangunan sistem secara fasa demi fasa.

INFORMATION TECHNOLOGY

The Information Technology Programme was established in 1989 with the following objectives:

- *To increase departmental productivity through an effective and efficient management of Environmental Information System.*
- *To enhance the IT skill of DOE staff.*

In 1999, a networking mechanism was introduced to all State and Branch DOE Offices through COINS (Cooperate Information Superhighways) Service which is provided by Telekom Malaysia Berhad. The services included:

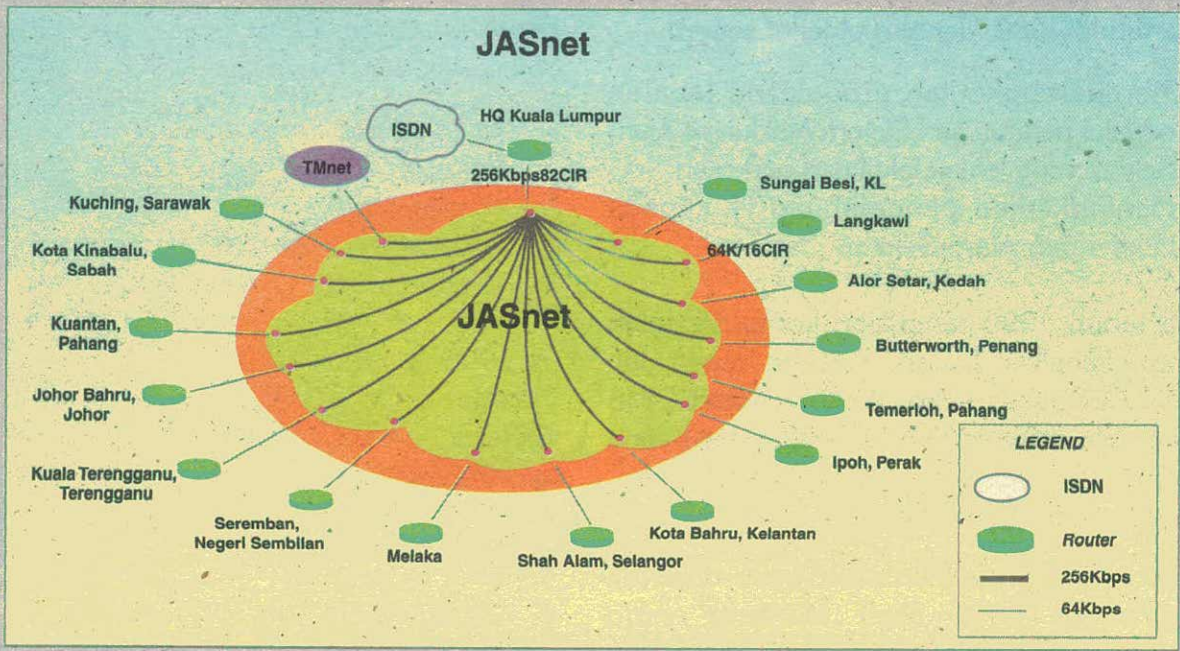
- *Virtual Private Network also called Wide Area Networking (WAN) or Intranet to allow direct communication between the Head Office and States Office (Figure 8.0)*
- *Internet Access through Telekom's Internet Services (TmNet)*
- *Voice over IP/Frame delay (VoIP) with voice calls and fax within the organization.*

E-Mail

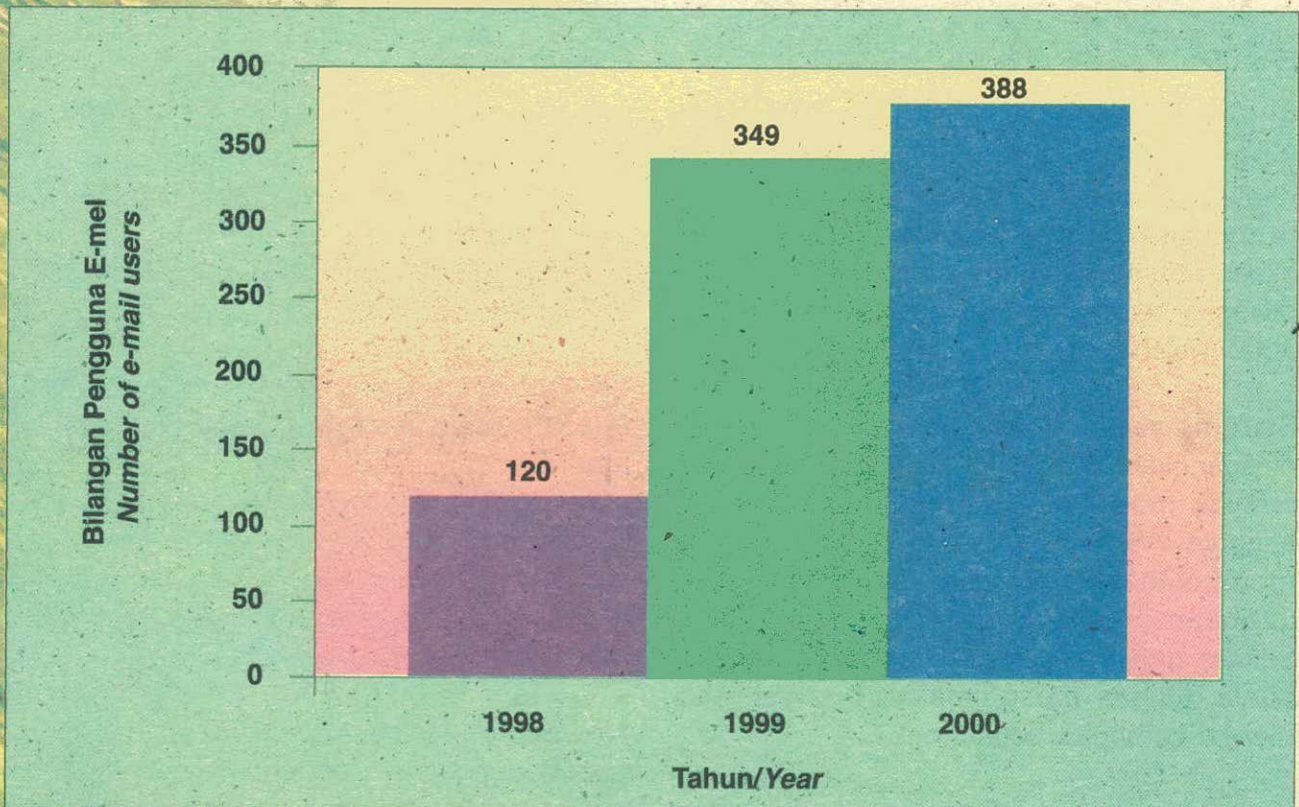
The e-mail usage among the DOE staff was rather limited before implementation of COINS. For 1999, there were 349 e-mail accounts, a significant increase from the previous year and it is estimated that by 2000 the number will increase to 388 (Figure 8.1).

On Application Systems Development, a Web-based system was proposed. This system would greatly alleviate many of the problems currently faced by the staff. With a Web-based system, authorized access to the Department's systems could be made from any point in the world with a Web browser through a computer that is linked to the Internet.

However due to the immensity of the project, application system development work could only proceed on a phase by phase basis. The first phase started in 1999 involving the development of application systems for



Rajah 8.0 Jabatan Alam Sekitar : Rangkaian Komputer atau Intranet
Figure 8.0 Department of Environment : Wide Area Networking or Intranet



Rajah 8.1 Jabatan Alam Sekitar : Jumlah Pengguna Emel
Figure 8.1 Department of Environment : Number of E-mail Users



Fasa pertama telah dimulakan pada tahun 1999 dan melibatkan pembangunan sistem aplikasi untuk Bahagian Kawalan. Nama umum untuk sistem ini ialah Sistem Kawalan Alam Sekitar (KAS). Modul-modul yang akan dibangunkan ialah modul pelesenan, modul penguatkuasaan dan modul pemantauan. Fasa pertama ini juga melibatkan pembangunan sistem yang dikenali sebagai E-SIMPAS (inventori punca-punca pencemaran), E-SWIS (sistem buangan terjadual), E-PLDS (sistem beban pencemaran) dan E-IWK (Rajah 8.2).

Sistem KAS apabila beroperasi akan memberi kemudahan berikut:-

- 'Portable computing'
- Kilang-kilang yang dikawal oleh Jabatan Alam Sekitar dapat menghantar maklumat yang diperlukan ke Sistem KAS melalui Internet. Ini dapat membantu pelanggan memasuki data sendiri secara sistem 'customer-centric'
- Kakitangan yang menjalankan tugas di luar negeri boleh menggunakan Sistem KAS melalui Internet.

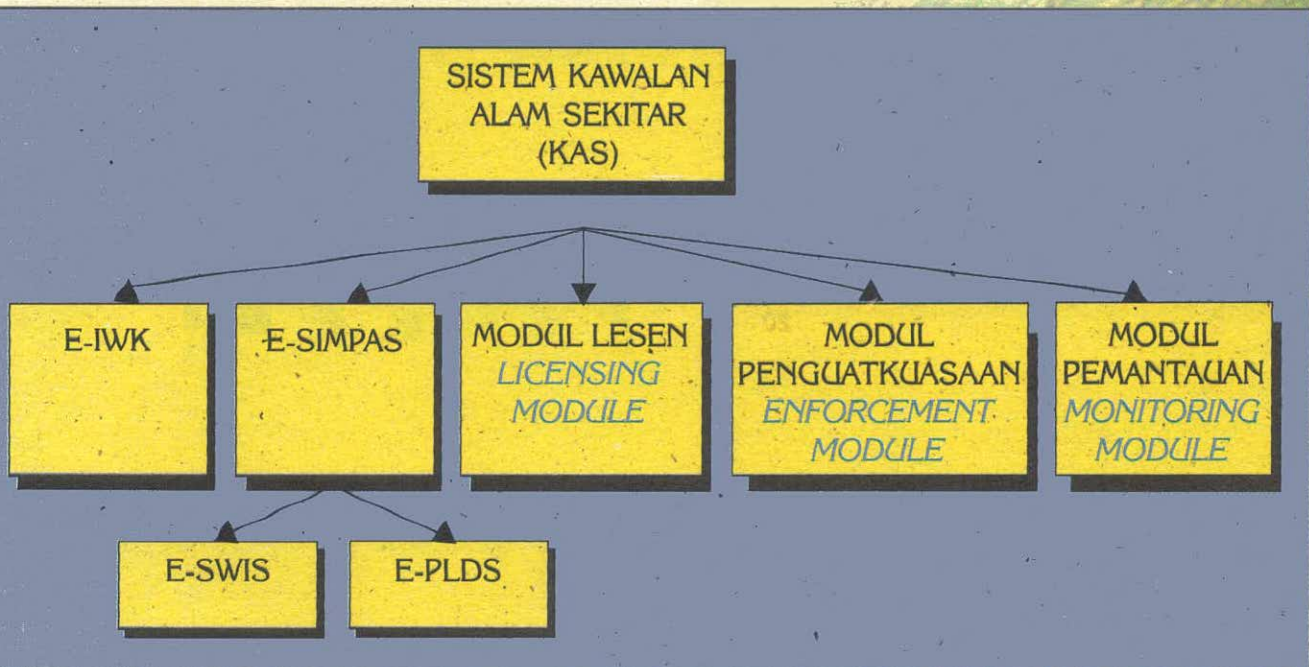
Kerja pembangunan sistem aplikasi akan diteruskan hingga ke tahun 2000 dan dijadualkan siap pada pertengahan tahun 2000.

enforcement activities. The generic name of the system was "Sistem Kawalan Alam Sekitar" (KAS) and the modules to be developed would be modules on licensing, enforcement and monitoring. Also to be included in the first phase was the development of systems currently known as E-SIMPAS (inventory of pollution sources), E-SWIS (scheduled wastes), E-PLDS (pollution loads) and E-IWK. (Figure 8.2).

The KAS system when in operation would facilitate the following:-

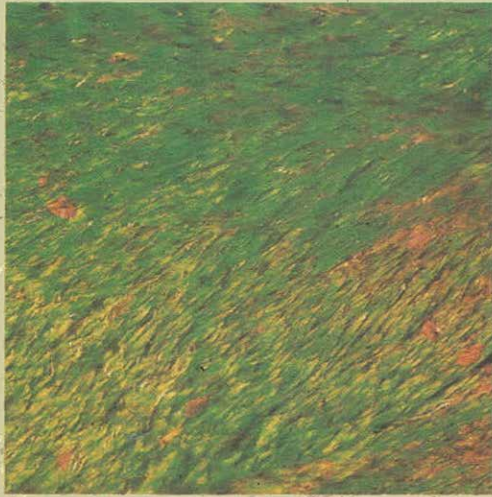
- Portable computing.
- Factories that are being monitored by Department of Environment can now send in required information directly to DOE through the KAS system by way of the Internet. This is also a step towards realizing a more customer-centric system whereby data is entered at source by the clients themselves.
- Staff on overseas assignments can log into the KAS system through the Internet.

The application system development work will continue in the year 2000 and is scheduled for completion by mid 2000.



Rajah 8.2 Jabatan Alam Sekitar : "Sistem Kawalan Alam Sekitar"
Figure 8.2 Department of Environment : "Sistem Kawalan Alam Sekitar"

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Chapter 9

INSTITUT LATIHAN DAN KEMAHIRAN ALAM SEKITAR (IKLAS)

Kerja-kerja awal bagi penubuhan Institut Latihan dan Kemahiran Alam Sekitar atau IKLAS di tapak seluas 10 ekar dalam kampus UKM di Bangi bermula pada tahun 1997. Kerja-kerja pembinaan bermula pada bulan Jun 1999 dan dijangka siap pada bulan Disember 2000.

IKLAS akan menyediakan kemudahan latihan kepada kakitangan Jabatan dan lain-lain agensi kerajaan yang berkaitan serta sektor swasta dalam belbagai aspek pengurusan alam sekitar.

Pada tahun 1999, program latihan yang telah berjaya dilaksanakan ialah:

- Program Sangkutan yang melibatkan 28 orang pegawai seluruh negara.
- Latihan Percontohan Cerobong 22-27 Mac
- Penguatkuasaan Praktik dan Pemeriksaan di Tapak I 31 Mei - 12 Jun
- Alam Sekitar dan Perancangan Fizikal 29 Mei - 5 Jun
- Pengurusan dan Kawalan Buangan Toksid dan Berbahaya 8-14 Ogos
- Penguatkuasaan Kehakiman dan Isu Perundangan Berkaitan 17-24 Oktober
- Penguatkuasaan Praktik dan Pemeriksaan di Tapak II 7-20 November

• Kursus Luar Jabatan

IKLAS telah mengendalikan seramai 102 orang kakitangan JAS menghadiri berbagai kursus latihan yang dianjurkan oleh lain agensi dan seramai 78 orang kakitangan.

- Kursus Dalam Jabatan yang melibatkan seramai 922 orang penyerta dari JAS dan lain-lain agensi termasuk penyertaan dari negara ahli ASEAN.

INSTITUTE FOR ENVIRONMENTAL SKILLS AND TRAINING (IKLAS)

Preliminary works for the establishment of the Institute for Environmental Skills and Training or IKLAS on a 10 acres site within the UKM Bangi campus began in 1997. Physical construction began in June 1999 and is expected to be completed by December 2000.

IKLAS will provide facilities for training of staff of the Department, other related government agencies as well as the private sector in various aspects of environmental management.

In 1999, the following training programmes were successfully implemented:

- Attachment programmes involving 28 officers throughout the country
- Practical Stack Sampling 22-27 March 1999
- Practical Enforcement and On-Site Inspection I 31 May-12 June 1999
- Environment and Physical Planning 29 May-5 June 1999
- Management and Control of Toxic and Hazardous Waste 8-14 August 1999
- Judicial Enforcement and Related Legal Issues 17-24 October 1999
- Practical Enforcement and On-Site Inspection II 7-20 November 1999

• External Training Programme

IKLAS facilitated the attendance of 102 DOE staff members to participate in training courses organised by other agencies as well as participation in various training programmes overseas for 78 staff members.

- In-house Training programmes involving 922 participants from DOE and other agencies including participants from ASEAN member countries.



Kursus:

- Latihan Pengendalian Peralatan Teknikal Punca-Punca Bergerak, Peralatan Smoke Meter AVL dan Peralatan CO/HC Analyser 28 Feb.-2 Mac 1999
- Kursus induksi 2-4 Mac 1999
- "Workshop on Training Management System (TMS)" 22-24 Mac 1999
- "Seminar on SWOT" 26 Mac 1999
- Latihan Asas Penggunaan GIS 1/99 30 Mac-1 April 1999
- "MS Office 95/97" 12-15 April 1999
- "Environmental Impact Assessment Report Assessment Course" 19-22 April 1999
- "Practical Stack Sampling Course" 19-23 April 1999
- "Environmental Communication and Information Dissemination Course" 10-15 Mei 1999
- "Workshop on Cleaner Production" 12-13 Mei 1999
- "Seminar on Enforcement for DOE's State Directors" 6-8 Julai 1999
- "Practical Enforcement Course" 12-17 Julai 1999
- "Oil Spill Contingency Plan and Beach Clean-up Course" 12-15 Julai 1999
- "Stacksampling As Tool for Enforcement Course" 16-18 Ogos 1999
- "Finance and Administration Course" 16-20 Ogos 1999
- "Effective Writing Skill Course" 26-28 Ogos 1999
- "Workshop on Biology and Biological Indicator Monitoring Programme" 1-2 September 1999
- "Management on Procedures and Enforcement On Scheduled Waste Course" 7-11 September 1999
- "Enforcement and Investigation on Open Burning Course" 8-9 September 1999
- "JAS-NET Programme" 15-16 September 1999

Courses:

- "Pengendalian Peralatan Teknikal Punca-Punca Bergerak, Peralatan Smoke Meter AVL dan Peralatan CO/HC Analyser" 28 Feb.-2 March 1999
- Induction Course 2-4 March 1999
- Workshop on Training Management System (TMS) 22-24 March 1999
- Seminar on SWOT 26 March 1999
- Training on "Asas Penggunaan GIS 1/99" 30 March-1 April 1999
- MS Office 95/97 12-15 April 1999
- Environmental Impact Assessment Report Assessment Course 19-22 April 1999
- Practical Stack Sampling Course 19-23 April 1999
- Environmental Communication and Information Dissemination Course 10-15 May 1999
- Workshop on Cleaner Production 12-13 May 1999
- Seminar on Enforcement for DOE's State Directors 6-8 July 1999
- Practical Enforcement Course 12-17 July 1999
- Oil Spill Contingency Plan and Beach Clean-up Course 12-15 July 1999
- Stacksampling As Tool for Enforcement Course 16-18 August 1999
- Finance and Administration Course 16-20 August 1999
- Effective Writing Skill Course 26-28 August 1999
- Workshop on Biology and Biological Indicator Monitoring Programme 1-2 September 1999
- Management, Procedures and Enforcement Of Scheduled Wastes Course 7-11 September 1999
- Enforcement and Investigation on Open Burning Course 8-9 September 1999
- JAS-NET Programme Training 15-16 September 1999



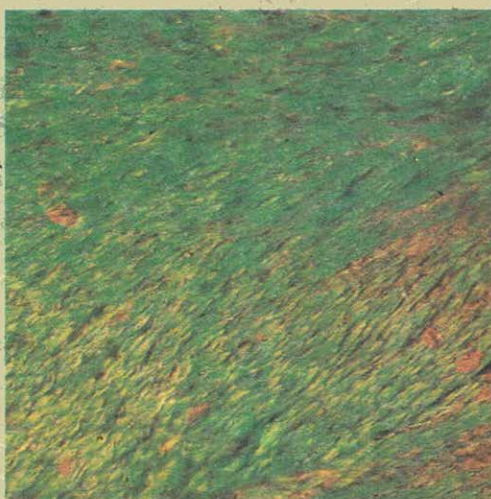
- "Intensive Course on Environmental Management" 9-11 September 1999
- "MS Office Power Point" 20-21 September 1999
- "MS Office Power Point" 5-6 October 1999
- "Workshop on MS 9000 Internal Quality Audit" 12-14 Oktober 1999
- "Application systems/GIS" 18 Oktober 1999
- Pengukuran dan Jangkaan Impak Bunyi Bising 3-5 November 1999
- "Waste Water Engineering Course" 21-26 November 1999
- Teknikal Peralatan Pemantauan Air Tanah 10-11 November 1999
- Kemahiran dan Kecekapan Teknikal latihan bagi Juruteknik 15-17 November 1999
- "Workshop on Manual and Automatic Air Monitoring" 21-22 November 1999
- "Training For Trainers" 25-26 November 1999
- "Workshop on Environmental Auditing" 7 Disember 1999
- "Oracle Discoverer" 21-22 Disember 1999

- Intensive Course on Environmental Management 9-11 September 1999
- MS Office Power Point 20-21 September 1999
- MS Office Power Point 5-6 October 1999
- Workshop on MS 9000 Internal Quality Audit 12-14 October 1999
- Application Systems/GIS 18 October 1999
- "Pengukuran dan Jangkaan Impak Bunyi Bising" 3-5 November 1999
- Waste Water Engineering Course 21-26 November 1999
- Training on "Teknikal Peralatan Pemantauan Air Tanah" 10-11 November 1999
- "Kemahiran dan Kecekapan Teknikal" Course for Technicians 15-17 November 1999
- Workshop on Manual and Automatic Air Monitoring 21-22 November 1999
- Training For Trainers 25-26 November 1999
- Workshop on Environmental Auditing 7 December 1999
- Oracle Discoverer Course 21-22 December 1999



IKLAS dalam peringkat pembinaan
IKLAS under construction

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Chapter 10

PROGRAM-PROGRAM BARU

Program Promosi "Cleaner Production" (CP)

Dalam beberapa tahun ini, CP atau pengurangan bahan buangan telah menjadi penting dan pilihan yang berekonomi bagi pengurangan pencemaran atau bahan buangan. Objektif utama CP ialah mencegah daripada terjadinya pencemaran atau bahan buangan, dengan demikian meminimumkan kos kawalan pencemaran, pengurangan risiko dan menyediakan peluang baru bagi keuntungan perniagaan. Selari dengan pembangunan ini, JAS telah menganjurkan Bengkel Kebangsaan pada 12 - 13 Mei 1999, di Shah Alam, Selangor. Objektif utama ialah mengenalpasti isu yang berkaitan dengan promosi CP dan pelaksanaan Program CP Kebangsaan. Bengkel ini mengutarakan seperti berikut:

- Ekonomi Instrumen, insentif dan mekanisma tabung bagi menyelaraskan penggunaan CP dan pengurangan bahan buangan
- Peranan Institusi dan sokongan bagi menggalakkan kegunaan CP dan kerjasama antara agensi
- Langkah-langkah peraturan bagi mencapai pelaksanaan pengurusan alam sekitar yang lebih baik dan menyokong kegunaan CP dalam skim odit, CP/Sistem Pengurusan Alam Sekitar (EMS) dan penggunaan teknologi mesra alam
- Pendidikan, kesedaran dan latihan
- CP database dan sistem maklumat, komunikasi dan jaringan kerja
- Bantuan teknikal, kajian dan projek demonstrasi bagi menjelaskan "cost benefit" CP
- Inisiatif penyelidikan bagi aplikasi CP bagi sektor industri yang berlainan.

Susulan daripada bengkel ini, kempen kesedaran bagi pelaksanaan CP bagi industri sadur elektrik di negeri Selangor, Negeri Sembilan dan Kuala Lumpur telah dilancarkan dan akan diperluaskan di lain negeri tidak lama

NEW AREAS OF ACTIVITIES

Cleaner Production Promotion Programme

In recent years, cleaner production (CP) or waste minimisation has emerged as an increasingly important and economically viable option for pollution or waste reduction. The primary objective of CP is to avoid generating pollution or waste, thereby minimising pollution control cost, reducing risks and provide new opportunities for business profitability. In tandem with this development, DOE organised a National Workshop on Cleaner Production on 12 - 13 May 1999 in Shah Alam, Selangor. The main objectives of the workshop were to identify issues related to cleaner production (CP) promotion and to propose recommendations for planning and implementation of National CP Programme. The workshop highlighted the following:

- *Economic instruments, incentives and funding mechanism to facilitate CP adoption and waste minimisation*
- *Institutional roles and support to encourage CP practices and interagency cooperation*
- *Regulatory measures to achieve better environmental performance and to support CP using auditing schemes, CP/ Environmental Management System (EMS) and use of environmentally sound technologies*
- *Education, awareness and training*
- *CP database and information system, communication and networking*
- *Technical assistance, case studies and demonstration projects to illustrate cost-benefits of CP*
- *Research initiatives for CP application for different industry sectors.*

Following the workshop, an awareness campaign for implementation of CP for the electroplating industries in Selangor, Negeri Sembilan and Kuala Lumpur was launched and would be extended to other parts of the



lagi. Kajian ke atas insentif ekonomi bagi menyelaraskan penggunaan CP telah dimulai pada tahun 1999 dengan kerjasama MITI dan perunding dari DANCED dan CETEC.

country in due course. A study on economic incentives to facilitate CP adoption was also initiated in 1999 in collaboration with MITI and consultants from DANCED and CETEC.



LAMPIRAN

ANNEX

Cadangan Piawaian Sementara Kualiti
Air Kebangsaan MalaysiaProposed Interim National Water
Quality Standards for Malaysia

PARAMETER / PARAMETERS	KELAS / CLASSES					
	I	IIA	IIB	III#	IV	V
Ammoniakal Nitrogen <i>Ammoniacal Nitrogen</i>	0.1	0.3	0.3	0.9	2.7	2.7
BOD (mg/l) <i>BOD (mg/l)</i>	1	3	3	6	12	12
COD (mg/l) <i>COD (mg/l)</i>	10	25	25	50	100	100
DO (mg/l) <i>DO (mg/l)</i>	7	5-7	5-7	3-5	3	1
pH <i>pH</i>	6.5-8.5	6.5-9.0	6.5-9.0	5-9	5-9	-
Warna (TUC) <i>Colour (TUC)</i>	15	150	150	-	-	-
Konduktiviti (μ mos/cm)** <i>Elec. Conductivity (μmos/cm)**</i>	1000	1000	-	-	6000	-
Sampah Terapung <i>Floating Solids</i>	NV	NV	NV	-	-	-
Bau <i>Odour</i>	NOO	NOO	NOO	-	-	-
Kemasinan (%)** <i>Salinity (%)**</i>	0.5	1	-	-	2	-
Rasa <i>Taste</i>	NOT	NOT	NOT	-	-	-
Jumlah Pepejal Terlarut (mg/l) <i>Total Dissolved Solid (mg/l)</i>	500	1000	-	-	4000	-
Jumlah Pepejal Terampai (mg/l) <i>Total Suspended Solid (mg/l)</i>	25	50	50	150	300	300
Suhu ($^{\circ}$ C) <i>Temperature ($^{\circ}$C)</i>	-	Normal 2	-	Normal 2	-	-
Kekeruhan (NTU) <i>Turbidity (NTU)</i>	5	50	50	-	-	-
Faecal Coliform (counts/100 ml) <i>Faecal Coliform (counts/100 ml)</i>	10	100	400	5000 (20000) @	5000 (2000) @	-
Jumlah Coliform (counts/100 ml) <i>Total Coliform (counts/100 ml)</i>	100	5000	5000	5000	5000	5000
Al (mg/l) <i>Al (mg/l)</i>	-	-	-	0.056	0.5	-
As (mg/l) <i>As (mg/l)</i>	N	0.05	NR	0.045 (0.44)	0.1	+
Ba (mg/l) <i>Ba (mg/l)</i>	N	1	NR	-	-	+



PARAMETER / PARAMETERS	KELAS / CLASSES					
	I	IIA	IIB	III#	IV	V
Cd (mg/1) <i>Cd (mg/1)</i>	N	0.005	NR	0.001 (0.01 1**)	0.01	+
Cr (IV) (mg/1) <i>Cr (IV) (mg/1)</i>	N	0.05	NR	0.054 (1.45)	0.1	+
Cr (III) (mg/1) <i>Cr (III) (mg/1)</i>	N	-	NR	- (2.53)	-	+
Cu (mg/1) <i>Cu (mg/1)</i>	N	1	NR	0.01 (0.012*)	0.2	+
Keliatan (mg/1) <i>Hardness (mg/1)</i>	N	100	NR	-	-	+
Ca (mg/1) <i>Ca (mg/1)</i>	N		NR	-	-	+
Mg (mg/1) <i>Mg (mg/1)</i>	N	0.05	NR	-	-	+
Na (mg/1) <i>Na (mg/1)</i>	N	-	NR	-	3 SAR	+
K (mg/1) <i>K (mg/1)</i>	N	-	NR	-	-	+
Fe (mg/1) <i>Fe (mg/1)</i>	N	0.3	NR	1	1 (Daun/Leaf) 5 (DI/Others)	+
Pb (mg/1) <i>Pb (mg/1)</i>	N	0.05	NR	0.01 (0.014*)	5 -	+
Mn (mg/1) <i>Mn (mg/1)</i>	N	0.1	NR	0.1	0.2	+
Hg (mg/1) <i>Hg (mg/1)</i>	N	0.001	NR	0.0001 (0.004)	0.002	+
Ni (mg/1) <i>Ni (mg/1)</i>	N	0.05	NR	- (0.9*)	0.2	+
Se (mg/1) <i>Se (mg/1)</i>	N	0.01	NR	0.037 (0.25)	0.02	+
Ag (mg/1) <i>Ag (mg/1)</i>	N	0.05	NR	- (0.0002)	-	+
Sn (mg/1) <i>Sn (mg/1)</i>	N	NR	NR	0.05	-	+
Cl (mg/1) <i>Cl (mg/1)</i>	N	NR	NR	-	-	+
Zn (mg/1) <i>Zn (mg/1)</i>	N	5	NR	- (0.35)	2	+
B (mg/1) <i>B (mg/1)</i>	N	1	NR	3.4	0.75	+
Cl1 (mg/1) <i>Cl1 (mg/1)</i>	N	200	NR	-	79	+
Cl2 (mg/1) <i>Cl2 (mg/1)</i>	N	-	NR	0.022	-	+
CN (mg/1) <i>CN (mg/1)</i>	N	00.2	NR	0.0023 (0.058)	-	+

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PARAMETER / PARAMETERS	KELAS / CLASSES					
	I	IIA	IIB	III#	IV	V
F (mg/l) <i>F (mg/l)</i>	N	1	NR (11)	-	1	+
NO ₃ /NO ₂ (mg/l) <i>NO₃/NO₂ (mg/l)</i>	N	7/3	NR	0.028 (0.37)	5	+
P (mg/l) <i>P (mg/l)</i>	N	0.1	NR	0.1	-	+
Silica (mg/l) <i>Silica (mg/l)</i>	N	50	NR	-	-	+
SO ₄ (mg/l) <i>SO₄ (mg/l)</i>	N	200	NR	-	-	+
S (mg/l) <i>S (mg/l)</i>	N	0.05	NR	0.001	-	+
CO ₂ (mg/l) <i>CO₂ (mg/l)</i>	N	-	NR	-	-	+
Gross- (Bql) <i>Gross- (Bql)</i>	N	0.1	NR	-	-	+
Gross- (Bql) <i>Gross- (Bql)</i>	N	1	NR	-	-	+
Ra-226 (Bql) <i>Ra-226 (Bql)</i>	N	+0.1	NR	-	-	+
Sr-90 (Bql) <i>Sr-90 (Bql)</i>	N	+0.1	NR	-	-	+
CCE (µg/l) <i>CCE (µg/l)</i>	N	500	NR	-	-	+
MBAS/BAS (µgl) <i>MBAS/BAS (µgl)</i>	N	500	NR	200	NR	+
O & G (Mineral (mg/l) <i>O & G (Mineral (mg/l)</i>	N	40;NF	NR	NL	NR	+
O & G (Emulsified edible) (µg/l) <i>O & G (Emulsified edible) (µg/l)</i>	N	7000;NF	NR	NL	NR	+
PCB (mg/l) <i>PCB (mg/l)</i>	N	0.1	NR	0.044 (6.1)	NR	+
Phenol (µg/l) <i>Phenol (µg/l)</i>	A	10	NR	(9900)	NR	NR
Aldrin/ <i>Aldrin/</i>	A	0.02	NR	0.08	NR	NR
Dieldrin (µg/l) <i>Dieldrin (µg/l)</i>	A		NR	(0.2) 0.13	NR	NR
BHC (µg/l) <i>BHC (µg/l)</i>	A	2	NR	(9.9)	NR	NR
Chlordane (µgl/l) <i>Chlordane (µgl/l)</i>	A	0.08	NR	(2.2) 0.004	NR	NR
t-DDT (µg/l) <i>t-DDT (µg/l)</i>	A	0.1	NR	(1)	NR	NR
Endosulfan (µg/l) <i>Endosulfan (µg/l)</i>	A	10	NR	- (0.01)	NR	NR



PARAMETER / PARAMETERS	KELAS / CLASSES					
	I	IIA	IIB	III#	IV	V
Heptachlor/ Heptachlor/	A	0.05	NR	0.06	NR	NR
Epoxide (µg/l) Epoxide (µg/l)	A	-	NR	(0.91)	NR	NR
Lindane (µg/l) Lindane (µg/l)	A	2	NR	0.38 (2.9)	NR	NR
2,4-D (µg/l) 2,4-D (µg/l)	A	70	NR	(450)	NR	NR
2,4, 5-T (µg/t) 2,4, 5-T (µg/t)	A	10	NR	(160)	NR	NR
2,4, 5-TP (µg/l) 2,4, 5-TP (µg/l)	A	4	NR	(850)	NR	NR
Paraquat (µg/l) Paraquat (µg/l)	A	10	NR	(1800)	NR	NR

Nota:

- KELAS I** : Pemuliharaan bekalan air alam sekitar semulajadi I - Secara pratikal rawatan tidak diperlukan
Perikanan I - Spesies akuatik yang sangat sensitif
- KELAS IIA** : Bekalan Air II - Rawatan konvensional diperlukan
Perikanan II - Spesies akuatik yang sensitif
- KELAS IIB** : Kegunaan rekreasi yang melibatkan penyentuhan badan (body contact)
- KELAS III** : Bekalan Air III - Rawatan menyeluruh diperlukan
Perikanan III - biasanya, mempunyai nilai ekonomi dan spesies ternakan
- KELAS IV** : Pengairan
- KELAS V** : Tidak sesuai untuk di atas
- NV** : Tiada sampah sarap atau bahan-bahan boleh apung yang kelihatan
- NOO** : Tiada bau yang menyenangkan
- NOT** : Tiada rasa yang menyenangkan
- **** : Parameter yang berkaitan, hanya satu dicadangkan untuk digunakan
- @** : Tiada melebihi tahap maksima
- NR** : Tiada ulasan/saranan
- *** : Pada keliatan 50 mg/l CaCO³
- #** : Kepekatan purata 24 jam dan maksima
- NF** : Bebas dari lapisan ketampakan, penyahwarnaan dan buangan
- NL** : Bebas dari sebarang warna lapisan yang kotor
- N** : Paras semulajadi
- +** : Melebihi paras KELAS IV
- A** : Tiada

Notes:

- CLASS I** : Conservation of natural environment water supply I - practically no treatment necessary
Fishery I - very sensitive aquatic species
- CLASS IIA** : Water Supply II - conventional treatment required
Fishery II - Sensitive aquatic species
- CLASS IIB** : Recreational use with body contact
- CLASS III** : Water Supply II - extensive treatment required
Fishery III - common, of economic value, and tolerant species livestock drinking
- CLASS IV** : Irrigation
- CLASS V** : None of the above
- NV** : No Visible floatable materials or debris
- NOO** : No Objectionable odour
- NOT** : No Objectionable taste
- **** : Related Parameters, only one recommended for use
- @** : Maximum not to be exceeded
- NR** : No Recommendation
- *** : At hardness 50 mg/l CaCO³
- #** : 24-hr average and maximum (bracketed) concentrations are shown
- NF** : Free from visible film, sheen, discoloration and deposits
- NL** : Free from visible layer, discoloration and deposits
- N** : Natural levels
- +** : Levels above Class IV
- A** : Absent

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